

It's Important to Know In Time'
Member Associated Business Papers, Inc.; Audit Bureau of Circulations.
The Newspaper of the Industry

Air Conditioning & REFRIGERATION

Production Tools for Victory

Reentered as second-class matter October 3, 1936 at the post office at Detroit, Michigan, under the Act of March 3, 1879. Trade Mark Registered U. S. Patent Office. Copyright, 1945, by Business News Publishing Co.



'Written To Be Read on Arrival'
Issued Every Monday at
5229 Cass Ave., Detroit 2, Mich.
JAN. 29, 1945
Vol. 44, No. 5, Serial No. 828
Established 1926.

Inside Dope

By George F. Taubeneck

Henry Wallace
Secretary for Air
Budget Message
Refrigeration Baby
Fund for Baby
Taps for a Pioneer
C.E.D. News

Henry Wallace

News that Henry Wallace is not only to be the new Secretary of Commerce, but may also replace Jesse Jones in control of all the government's far-flung lending agencies and business enterprises, is nothing less than shattering.

We now take the floor to recommend another Cabinet appointment to President Roosevelt: Make Sewell Avery Secretary of Labor.

That would make just as much sense, and would partly—but by no means entirely—balance the scales.

Secretary for Air

Frequently it has been suggested that the Cabinet should be enlarged by the creation of three or four new portfolios, among which would be a Secretary for Air Transport. Son Elliott no doubt has this job in the bag.

Budget Message

Portents of the inroads of "planned economy" upon the nation's future after the war finally ends can be found in the President's Budget Message.

We don't like the sound of it.

Hints are given that, in order to manage the national debt, possibly one fourth of the national economy will be managed, too. Manipulation of interest rates, control of wages and salaries, continued deficit spending, tax finagling, continued borrowing, and possible government operation of industrial enterprises it now owns (in addition to the creation of new TVA's) can all be foreseen.

One of the main troubles with a government-managed economy is its necessary reliance on cold statistics. In fact, the Budget Message requests a large appropriation for a statistical bureau.

All the government statisticians we've ever met, outside those in the Census Bureau, are fiends for the sampling method. This system of interviewing a couple of guys named Joe on a street corner and from their remarks conjecturing a national picture complete with figures running into millions and billions may be all right for the Gallup Poll and similar opinion studies, but it stinks when applied to business and industrial statistics.

Miscalculations of the most dangerous nature will surely follow if the managers of the planned economy base their judgments on reports concocted by the devotees of sampling.

In our opinion, there's no substitute for the individual judgments of the managers of free enterprises—men who know their own businesses at first hand.

There are two things wrong with sampling: (1) the samples, and (2) the people who interpret them.

Refrigeration Baby

If news is the unusual, then we have some news for you. In fact, we've never heard of this happening before.

Harry Swarthout of the Lipman Sales Co. sends us a clipping from the Philadelphia Inquirer which carries the startling information that a baby was recently born in the Tren-

(Concluded on Page 9, Column 1)

Auto Dealers Apparently See 'Green Pastures' In Appliances

DETROIT—Nearly 40% of the nation's automobile dealers want to take on additional lines—chiefly household appliances and radios—after the war, judging from reports of a survey recently completed by R. L. Polk & Co. here, publisher of city directories and statistician of the automobile industry.

A study of 10,000 of the 32,000 automobile dealers in the nation reveals that 38.2% said "yes" to the question, "Do you think you will be interested in taking on additional lines of merchandise after the war?"

Best response came from small town dealers, 44.7% of them being interested, while 37.0% of dealers in medium size localities were interested. In the large trading centers 32.8% of the automobile dealers nodded "yes."

Home appliances were the favored lines, 25.3% of all the interested dealers voting for them. Chief interest centered in the large towns, 30% of these dealers voting for appliances. Dealers in small and medium towns were about even in

their opinion of appliances: 24.3% and 23.2% respectively.

Radios landed in second place, being favored by 25.3% of the interested dealers, with the breakdown over dealers in small, medium, and large towns similar to that for appliances: 21.8%, 21.1%, and 29.7% respectively.

In successive order the following also have interested dealers as additional lines: airplanes, 18.2%; tractors, 13.8%; farm implements, 12.9%; housing materials, 3.3%; miscellaneous, 3.2%.

Tabulated by "make" of automobile dealer, greatest interest, on the percentage basis, in additional lines is shown by Hudson dealers, 53.8% of whom say they want to augment their present line.

Ford and DeSoto dealers tie at 49.1%, but Chevrolet dealers have the smallest percentage, 35.8%. Other dealers include Dodge, 45.9%; Pontiac, 43.5%; Studebaker, 43.2%; Willys, 42.1%; Packard, 41.7%; Chrysler, 40.9%; Graham, 40%; Buick, 36.6%; Oldsmobile, 36.4%.

Westinghouse Halts Production of Irons

MANSFIELD, Ohio—Westinghouse Electric & Mfg. Co. has voluntarily stopped production of electric irons for civilians in its plant at Mansfield, in order to transfer employees to critical war work.

J. H. Ashbaugh, vice president of the company in charge of the Appliance Division, in a letter informing the Consumers Durable Goods Division, WPB, of this action, said:

"We are voluntarily halting this civilian goods production due to the critical manpower situation in this area. New orders for urgently needed war goods and advanced schedules in this plant will soon require employment greater than at any time since Pearl Harbor. It has been our stated policy that we would not permit civilian goods production to interfere with war work, and it is in line with this policy that we are closing the iron production."

"We hope to be able to resume production of electric irons as soon as war conditions and the manpower situation will permit."

In April of 1944, WPB authorized the production of 157,000 electric irons in the Mansfield plant. Of that quantity, less than half had been completed before production was stopped. No electric iron production quota has been assigned to the plant for 1945.

Profit Figures Given By Nash-Kelvinator

NEW YORK CITY—All directors of Nash-Kelvinator Corp. were re-elected at the annual meeting of stockholders in Baltimore, Jan. 17, it was announced following a meeting of the board, which reelected all present officers of the corporation.

Indicated net profit for the first quarter of the corporation's fiscal year was \$519,166, after provision for taxes, as compared with \$1,060,261 for the corresponding period of a year ago, George W. Mason, president, reported in an operating analysis. The quarter ended Dec. 31, 1944.

Mr. Mason pointed out that first quarter operations were subject to 1944 income tax regulations, while the tax base of the comparable quarter of a year ago was computed under 1943 regulations. Current net profit return, he said, is consistent with the rate realized during the latter part of the previous fiscal year.

United Refrigerator Co. Expands Production By Plant Purchases

ST. PAUL—In a move to meet greatly increased war production needs and marking the start of a program of expansion planned for after-war operations, United Refrigerator Mfg. Co., Inc., of St. Paul, Minn., and Hudson, Wis., has taken over the businesses of two refrigeration cabinet manufacturers, bought a factory building in Pennsylvania, and is building another plant in St. Paul.

News of United's latest acquisitions was revealed last week in a joint announcement by R. S. Wieding and J. Frank Ganley, principals in the corporation and its affiliate, United Refrigerator Chemical Division, Inc., of St. Paul, manufacturer of silica gel and other dessicants.

Both the refrigeration cabinet business of Midwest Mfg. Co. of Galesburg, Ill., and the Pittsburgh Store Fixture & Equipment Co. of Blairsville, Pa., have been purchased by United. The former manufactured the Midwest line of reach-in refrigerators and the latter, the General line of food display and storage cabinets.

Both lines will be marketed after the war under the United trademark. All sales and advertising activities

(Concluded on Page 28, Column 1)

Store Lighting Will Be Dimmed February 1

WASHINGTON, D. C.—"Brown-out" regulations providing nationwide prohibition of lighting for outdoor advertising, certain types of show window lighting, and limiting outdoor lighting in general, will go into effect Feb. 1, to alleviate the critical fuel shortage, announces J. A. Krug, chairman of the War Production Board.

The new regulation, Utilities Order U-9, prohibits show window lighting except where necessary for interior illumination. Outdoor promotional lighting is likewise prohibited. Outdoor lighting for safety purposes, and directional or identification signs using not more than 60 watts per establishments are permitted for doctors, hotels, and other public lodging establishments.

Exceptions will be made to this regulation in areas where no saving in fuel would result, such as districts supplied by hydroelectric stations, Mr. Krug said.

Hershey Letter Is Answer To Many Draft Questions

WASHINGTON, D. C.—Maj. Gen. Hershey's letter to draft boards outlining policies to be followed in filling the increased draft quotas, was made public Jan. 19, and should serve to clear up some of the confusion that has existed.

Says one paragraph of this letter: "Since requirements of the armed forces are primarily for men under 30 years of age, the test of 'regularly engaged in' an activity in support of the national health, safety, or interest or an activity in war production should still be the test applied to a registrant in the age group 30 through 37. . . ."

This would seem to make it clear that "refrigerator repairmen" and "refrigerator engineers" over 30 years of age are obviously eligible for continued deferment.

In discussing the War Manpower Commission's list of essential activities which has been revised to specify those essential activities that are most critical in the war program at this time, the National Director of Selective Service says that:

"In transmitting the essential activity list, the Director of War Mobilization has recommended that the list be used as a guide in determining the men to be selected for the

(Concluded on Page 25, Column 5)

160 Distributors In N.E.W.A. Division

NEW YORK CITY—Since the Appliance Division of the National Electrical Wholesalers Association was organized at the April, 1944, convention 160 new members have been added to the Appliance Division, so that the organization now has a membership of about 750, a majority of whom comprise the Appliance Division, it has been reported by E. B. Ingraham, chairman of the division.

In his report Mr. Ingraham said that a number of functional committees have been put into operation to study various problems facing the appliance industry.

The Warranties, Service and Repair Parts Committee studied its subject at length and developed a questionnaire for mailing to the industry at large. The questionnaire will tend to disclose the experience and problems encountered by the industry on this subject.

At the Time Payment Financing Committee meeting one of the most important subjects discussed

(Concluded on Page 14, Column 1)

Rules Are Set Up For Convention 'Permits'

WASHINGTON, D. C.—Organizations planning to hold group meetings of more than 50 people, after Feb. 1 will have to show how the war effort would suffer if the meetings were not held, according to official announcement of the new War Committee on Conventions.

Annual Commercial Conference of Edison Electric Institute, scheduled for March 28-29 in Chicago, has been cancelled, announces C. E. Greenwood, commercial director.

The committee includes Col. J. Monroe Johnson, chairman, who is director of the Office of Defense Transportation; Robert P. Patterson, Under Secretary of War; Ralph A. Bard, Under Secretary of the Navy; J. A. Krug, chairman of the War

(Concluded on Page 28, Column 1)

Metal Shortages End Chances For 'Spot' Programs

Krug Indicates No Further Action Until Germany Surrenders

WASHINGTON, D. C.—Resumption of the manufacture of civilian products under the "spot" program, so hopefully anticipated two months ago, is almost certainly out until Germany surrenders, stated J. A. Krug, War Production Chairman, at his most recent press conference.

The possible effect of the current Allied upswing in the Pacific and in Europe as to the resurrection of the spot program, and the possibilities of WPB's being able to signal ahead before taking spot authorizations off the shelf, both were refused present comment by Mr. Krug.

"Let's wait until Germany folds up. Then we can talk business as is, not as may be," was the substance of his answer.

The most critical material shortages are steel and aluminum.

Steel production promises to be lowered 15% if all workers in the present 26-29 age group are drafted. Not all steel workers are listed under

(Concluded on Page 25, Column 3)

Tenney, Bridge, Pizor In New Norge Posts

DETROIT—J. M. Tenney, formerly refrigeration sales manager for Norge Division, Borg-Warner Corp., has been appointed western sales manager, succeeding the late Lee O. Cox, announces M. G. O'Harra, vice president in charge of sales.

Earl R. Bridge, formerly laundry equipment sales manager, has been named to Mr. Tenney's former post, and R. H. Pizor, who has been serving as key sales specialist, will succeed Mr. Bridge, added Mr. O'Harra.

Mr. Tenney's appointment is intended to strengthen Norge activities in the West, implied Mr. O'Harra, who remarked, "the rapid expansion of the western states is shown

(Concluded on Page 4, Column 5)

Frigidaire Appoints Service Department Staff

DAYTON, Ohio—Promotion of C. P. Ogden, R. K. Eley, R. V. Leslie, and A. J. Ritten has been announced by Paul V. Sprout, service manager of Frigidaire Division, General Motors Corp.

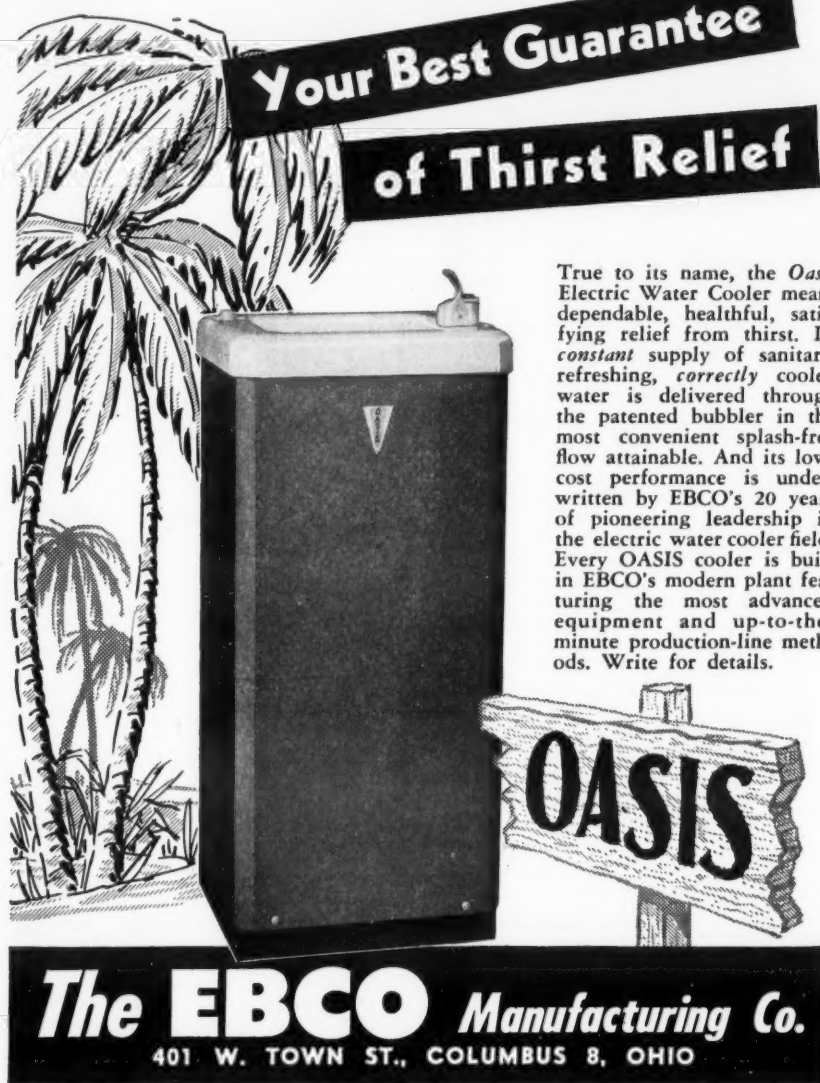
Mr. Ogden, now supervisor of service parts sales and the field contact division, has been with General Motors since 1920, and the Frigidaire service department since 1933. In 1942 he was assigned to special service as instructor in the operation of the .50 caliber machine gun.

Mr. Eley is now supervisor of the service technical division in complete

(Concluded on Page 28, Column 2)

G-E Exercises Options On Ohio Plant Site

ASHTABULA, Ohio—General Electric Co. has exercised options on about 100 acres of land here for the postwar construction of a plant to manufacture refrigeration units. The plant will probably cost between \$4 million and \$5 million, G-E announced.



**Your Best Guarantee
of Thirst Relief**

True to its name, the Oasis Electric Water Cooler means dependable, healthful, satisfying relief from thirst. Its constant supply of sanitary, refreshing, correctly cooled water is delivered through the patented bubbler in the most convenient splash-free flow attainable. And its low-cost performance is underwritten by EBCO's 20 years of pioneering leadership in the electric water cooler field. Every OASIS cooler is built in EBCO's modern plant featuring the most advanced equipment and up-to-the-minute production-line methods. Write for details.

The EBCO Manufacturing Co.
401 W. TOWN ST., COLUMBUS 8, OHIO

Price Adjustment Policy Seen In Order on Irons

WASHINGTON, D. C.—In order to encourage production of low-priced electric irons, the OPA has announced an adjustment provision under which narrow margin producers may apply for price increases.

The action will affect a relatively small number of firms that have been authorized to make a number of irons to retail for less than \$5.

OPA said that the great bulk of the electric iron manufacturers will, as previously announced, market their irons at no change from March, 1942, prices. After allocations were made by the War Production Board for the resumption of limited production of electric irons, a few makers of low-priced irons notified OPA that an increase over their March, 1942, ceilings would be necessary. At that time the agency said it would examine the cost information submitted by these companies to determine what would be a fair price.

By the order effective Jan. 12, 1945, any increased maximum price will not exceed an amount equal to the manufacturers' total October, 1941, cost to make and sell the article (or his October, 1941, selling price where that was lower), plus present increases in manufacturing costs that have resulted from legal changes in material prices and straight time factory wages, plus an amount determined by applying his average percentage profit on net sales in the years 1936-39 to his October, 1941, total cost.

'First Million' Refrigerators May Be 'Short' on Frozen Food Storage Space

Mitchell, WPB Official, Says Need For Speed
In Reconversion Will Hinder Design Changes

WASHINGTON, D. C.—The first million postwar refrigerators will be 1942 models without nearly enough frozen food storage space, frozen food packers and distributors were told recently by F. M. Mitchell, chief of WPB's Electric Goods Branch, Consumer Durable Goods Division.

Providing immediate postwar employment for millions of returning servicemen and former war workers is the most important factor in WPB's planning, he said. Engineering new models first thing would delay reconversion, and new models therefore are going to have to wait.

The possibility even of enlarging evaporators in 1942 models calls for considerable engineering thought. Time is the all-important factor, Mr. Mitchell emphasized. Reconversion in the shortest possible time is in-

dustry's biggest postwar responsibility.

It is also the most difficult aspect of postwar planning, he added. The priorities of military production have boosted present employment level well above those of even the highest peacetime years. Cutbacks and reconversion intervals promise to make the creation of continuing jobs the biggest problem American industry has ever tackled.

It isn't likely that more than 1½ million refrigerators can be turned out during the year after V-E day, Mr. Mitchell stated. The majority of these probably will be 1942 models that have no extra room for frozen foods.

WPB's AA-1 preference ratings of refrigeration repairs have kept approximately 20 million domestic refrigerators running, he pointed out. These are not equipped for adequate frozen food storage either. These facts represent a certain measure of delay which the frozen foods industry must consider in planning its immediate postwar activity.

The problem is one which will continue just as long as the need for military production continues, he said. Events in the European theater have proved the wisdom of taking nothing for granted as far as military needs are concerned.

Meanwhile it is safe to plan on the minimum and nothing more, he advised. Wherever individual circumstances will permit, manufacturers will do whatever can be done.

Dept. Store To Function As a Distributor

PITTSBURGH—Joseph Horne Co., department store here, has organized the Pittsburgh Products Co. to distribute refrigerators, radios, gas stoves, washers, and other electrical appliances in northern West Virginia, western Pennsylvania, and eastern Ohio.

Temporary offices are in the Empire Bldg., but permanent headquarters will be established later on Reedsdale St.

Officers of the company are A. H. Burchfield, Jr., president; R. W. Evans (for 15 years promotion and advertising manager of Ochiltree Electric Co.), vice president and general manager; J. E. McConaughy, treasurer; and R. F. Ashenfelter, treasurer.

Law Would Keep Utility From Cutting Off Service

BOSTON—A recommendation has been submitted to the 1945 Massachusetts Legislature by the State Public Utilities Commission to the effect that a gas or electric company be prohibited from stopping gas or electrical service for failure to pay for appliances purchased from the company.

Farnsworth Gets Okay On Television Station

FORT WAYNE, Ind.—Permission to erect and operate an experimental television station here has been granted by the Federal Communications Commission to Farnsworth Television & Radio Corp., according to E. A. Nicholas, president.

Farnsworth just recently purchased radio station WGL here from Westinghouse Radio Stations, Inc., and has on file with the FCC an application to operate an FM station, also.

BEFORE YOU PICK YOUR POSTWAR REFRIGERATOR FINISH...

"The Facts on Polymerin" describes the double-barreled competitive advantages you can gain by finishing your postwar refrigerators and coolers with long-wearing, speed-bake Polymerin.*

Polymerin for refrigerators and coolers is an organic baking enamel formulated with particular emphasis on lustrous, non-yellowing appearance and maximum resistance to grease and humidity. Here is a finish that stays beautiful longer—a finish that is fit companion to the mechanical smoothness and durability that will characterize your postwar product. Polymerin offers production advantages, too. Polymerin is the original speed-bake finish; and its speed-bake qualities result in savings which can help you to keep your finishing costs low!

Use the coupon below to get your free copy of "The Facts on Polymerin", a 32-page book-

let which presents clearly and factually the sales and production advantages of a Polymerin finish. This information-packed booklet is yours for the asking... send for a copy today!

POLYMERIN-200 AVAILABLE NOW

Comparable to regular Polymerin in flow, flexibility, durability and luster is Polymerin-200, a new finish that can be handled exactly the same as regular Polymerin! Polymerin-200 is made from materials which are currently obtainable.

POLYMERIN

The Original Speed-Bake Finish

A PRODUCT OF AULT & WIBORG
DIVISION OF INTERCHEMICAL CORPORATION

READ THIS BOOK

Ault & Wiborg Division of Interchemical Corporation
Empire State Bldg., New York 1, N.Y.

Please send, without obligation, a free copy of "The Facts on Polymerin"—the book that shows how a Polymerin finish can increase sales and reduce finishing costs.

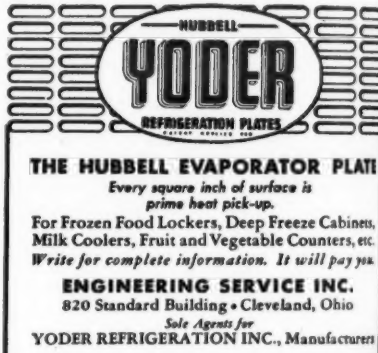
Name _____

Company _____

Address _____



*Reg. U. S. Pat. Off.



THE HUBBELL EVAPORATOR PLATE
Every square inch of surface is prime heat pick-up.
For Frozen Food Lockers, Deep Freeze Cabinets, Milk Coolers, Fruit and Vegetable Counters, etc.
Write for complete information. It will pay you.
ENGINEERING SERVICE INC.
820 Standard Building • Cleveland, Ohio
Sole Agents for
YODER REFRIGERATION INC., Manufacturers



CORDLEY
THE BATTLE PROVEN
Electric
WATER COOLERS
• THE PROVING GROUNDS OF WAR offer dramatic confirmation of the ability of Cordley Electric Water Coolers to withstand hard knocks. Supplied since 1942 for shipboard use to the Navy (Contract NKs 9982) and to the Maritime Commission. These same Battle-Tested Cordley Electric Water Coolers are now available for essential uses on land. Write for facts.
CORDLEY & HAYES
452 Fourth Ave., New York 16
Manufacturers of Water Coolers For 55 Years



**Headquarters
for
PARTS AND
SUPPLIES**
FOR ALL TYPES OF REFRIGERATION
SEND FOR OUR CATALOG ON YOUR LETTERHEAD
THE HARRY ALTER CO.
1728 S. Michigan Ave. Chicago, 16, Ill. Two Big Warehouses to Serve You 134 Lafayette St. New York, 13, N.Y.

7 REASONS WHY

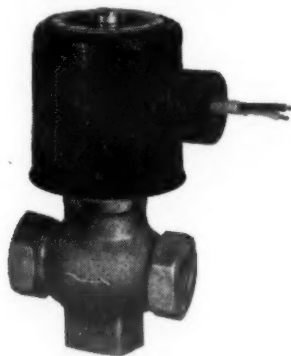
"DL" SOLENOID VALVES ARE PREFERRED

- 1** POWERFUL—Ample power to lift against high pressures.
- 2** QUIET—Design of plunger and guide tube minimizes objectionable A.C. hum.
- 3** EASILY INSTALLED—Substantial mounting boss on valve body makes for easy, rigid installation.
- 4** EASILY SERVICED—Can be disassembled and cleaned without disconnecting refrigerant lines or wiring.
- 5** POSITIVE CLOSING—Non magnetic needle and seat and strong "kick off" spring assure tight closing.
- 6** LONG LIVED—Valve bodies are of close-grained non-porous cast brass. Coils are of moisture-proof construction.
- 7** ECONOMICAL—Draw little current. Replacement parts if required are inexpensive.

Specify "DL" solenoid valves and take advantage of these features.

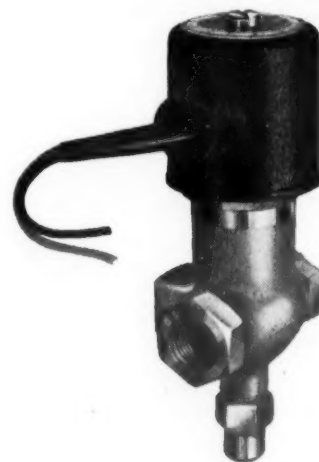
FOUR WIRE COIL

One of the features of "DL" solenoids preferred by jobbers and service men is the dual 115-230 volt 4 lead coil. This coil can be used on either 115 volt 60 cycle or 230 volt 60 cycle current by connecting the 4 leads in the right sequence. Correct wiring diagram is shown right on the coil—a great time saver.



No. 681—The No. 681 is of the pilot operated type and requires a minimum pressure drop of 1 p.s.i. to operate the piston.

Nominal capacity—liquid line
 7-1/2 tons Freon 17 tons Methyl
 1/2" female N.P.T. connections.



No. 686—The No. 686 is a heavy duty, large capacity pilot operated valve which requires a pressure drop of 1-3/4 p.s.i. to operate the piston when used with refrigerants, 5 p.s.i. on water. It is made with 2 sizes of orifices, 1/2" and 5/8".

Nominal capacity—liquid line
 1/2" orifice 11 tons Freon 23 tons Methyl
 5/8" orifice 17 tons Freon 34 tons Methyl

No. 683-3—This reliable valve, like all "DL" solenoids is designed for use with any fluid that will not attack brass. Furnished with three sizes of orifices, 1/8", 3/16", and 7/32".

Nominal capacity—liquid line
 3/16" orifice 3 tons Freon 6-1/2 tons Methyl
 7/32" orifice 3-3/4 tons Freon 8-3/4 tons Methyl
 3/8" female N.P.T. connections.



DETROIT LUBRICATOR COMPANY

General Offices: DETROIT 8, MICHIGAN

Division of AMERICAN RADIATOR & Standard Sanitary CORPORATION

Canadian Representatives RAILWAY AND ENGINEERING SPECIALTIES LIMITED, MONTREAL, TORONTO, WINNIPEG



"DL" Heating and Refrigeration Controls • Engine Safety Controls • Safety Float Valves and Oil Burner Accessories • Radiator Valves and Balancing Fittings • Arco-Detroit Air and Vent Valves • "Detroit" Expansion Valves and Refrigeration Accessories • Air Filters • Stationary and Locomotive Lubricators

What They Said About Appliance Markets At the Winter Mart

Editor's Note: The semi-annual session of Chicago's Furniture Mart is always the occasion for much discussion about what's going on in the industry. And about what ought to be going on, to the industry's advantage.

These informal discussions cover points made in recent publicity releases, conference speeches, press interviews, and casual conversation here and there around the Mart. The following viewpoints were among those expressed.

Lyman Hill on Postwar Refrigerator Sales

A recent prediction on the expected volume of postwar refrigerator sales by S. M. Livingston, of the U. S. Dept. of Commerce, set the figure at 5 million units for all mechanical refrigerators during the first year that the industry turns out that number.

Lyman Hill, economist for Servel, believed that figure was much too high. Mr. Livingston's estimate ignores consumer spending toward such durable goods as low-temperature storage cabinets and year-around air conditioning systems, he said—an estimate of 2½ million units probably would fall much closer to the mark.

Lou Miller on the Postwar Sealed Unit

The hermetically sealed unit in the postwar refrigerator promises to be the biggest individual headache in appliance engineering, according to L. H. Miller, sales manager of General Electric's refrigeration division.

The pump isn't any problem, he believed. The new small motors look even better than the bigger sizes used formerly on the same job. But the sealed unit has to compensate chemical, electrical, and metallurgical differences, and do it so well that unit repair is a rarity. It's a big problem in a small container.

Harry Warren on Postwar Selling

Sales will be the prime merchandising approach to the postwar appliance business, it seems to Harry E. Warren, manager of Edison General Electric Appliance Corp.'s advertising division.

The complete all-electric kitchen presents the dramatic idea around which the salesman's story logically is built, he thought. Selling, financing, and servicing the unit as a whole represents business on a new scale. His company has educated its wholesale distributors along those lines.

The training of men specifically for that kind of a sales job is part of the same picture, another member of the group contributed. Selling is a job in itself, not independent of the rest of the picture, but with an emphasis that no other activity should supersede for the salesman himself. There is little practical value in having each salesman start first at the bottom in some other department.

Roger Bolin on Informative Labels

Once in a while you'll notice a little folder tied to a piece of floor merchandise containing a simple statement of its features. Most manufacturers call it an informative label. Roger H. Bolin, manager of appliance sales and promotion for Westinghouse, had a good word to say for the idea.

It has a good deal of practical value, he explained. As a piece of information, it gives the name and address of the manufacturer, the dimensions, capacities and features of the product, its price, how it is made, what it will do, and a brief statement of the manufacturer's warranty.

It gives these facts in simple, non-technical language, without any sales arguments.

Fastened to the product in such a way that a customer can handle and read it easily, it gives him practical information he wants to know before buying. And the statements are made not by a salesman but by the manufacturer, backed by his guarantee.

The salesman likes it because it backs his statements. For him, the

Take New Posts In Norge Sales Setup



EARL R. BRIDGE

Earl R. Bridge has been appointed Norge refrigeration sales manager, succeeding J. M. Tenney who has been named western sales manager for the company. R. H. Pizor has been named laundry equipment sales manager, the post formerly held by Mr. Bridge.



J. M. TENNEY



R. H. PIZOR

important thing is the customer's decision to buy, and his continued satisfaction with the product after he has bought it.

The informative label allows less chance of misunderstanding, more confidence between buyer and seller. And the manufacturer likes it—his product moves into the home, where it can prove his claims and build goodwill for his line of products.

A. M. Sweeney on Postwar Appliances

The average housewife doesn't want a revolutionary refrigerator or a dream kitchen. She will want a tested, proven appliance, attractive in appearance but practical and economical in action.

A. M. Sweeney, sales manager for General Electric's major appliances, stated this fact not as his own conclusion but as the report of numerous national consumer surveys sounded out by the major appliance companies.

Such surveys also have indicated a tremendous postwar market, but it will be reached only through effective selling, he believes. The idea of electrical living will have to be sold first, then the actual appliances that will make it possible.

Present surveys also have indicated a tremendous postwar market, but certain pertinent facts may have been overlooked. People with money in their pockets now may change their minds about what they will buy, he thought, after war-swollen salaries and savings have been cut back.

High pressure competition will grow out of this condition, Mr. Sweeney believed, and electrical appliances will find themselves competing with many other products. Effective selling will become the industry's most effective weapon.

Homemaking is a big business. Housewives spend between 30 and 40 billion dollars a year, Mr. Sweeney illustrated. And there are still 8 million homes not even connected to power lines, besides the market still to be found in homes that have electricity and use only a fraction of its working potential.

The whole pattern of selling will change after the war, he believes, toward a more united effort. The successful dealer's selling ideas will be organized much more closely with those of his distributor and manufacturer. Promotion and display especially will reflect this trend, he said.

Norge Makes Shifts In Sales Staff

(Concluded from Page 1, Column 5) clearly by recent population and industrial trends. Remarkable gains have been made in virtually all parts of the territory.

With the exception of Mr. O'Harra, Mr. Tenney is the oldest member, in point of service, in the Norge sales department, having started as Los Angeles sales manager in 1929. He was successively eastern sales manager, New England divisional and regional manager, special southwest refrigeration representative, southern regional manager, and national sales manager for refrigerators.

Mr. Bridge joined Norge in 1934 and became laundry equipment sales manager within a year. He was largely responsible for initial marketing of the Norge laundry equipment line and for subsequent distribution and sales growth, declared Mr. O'Harra.

Mr. Pizor, the new laundry equipment sales manager, has been with Norge since 1933, but has been contacting distributors and dealers throughout the country for 22 years and has sold virtually every type of household appliance, according to Mr. O'Harra. A musician, he became interested in the sale of household appliances shortly after World War I when music stores began selling them.

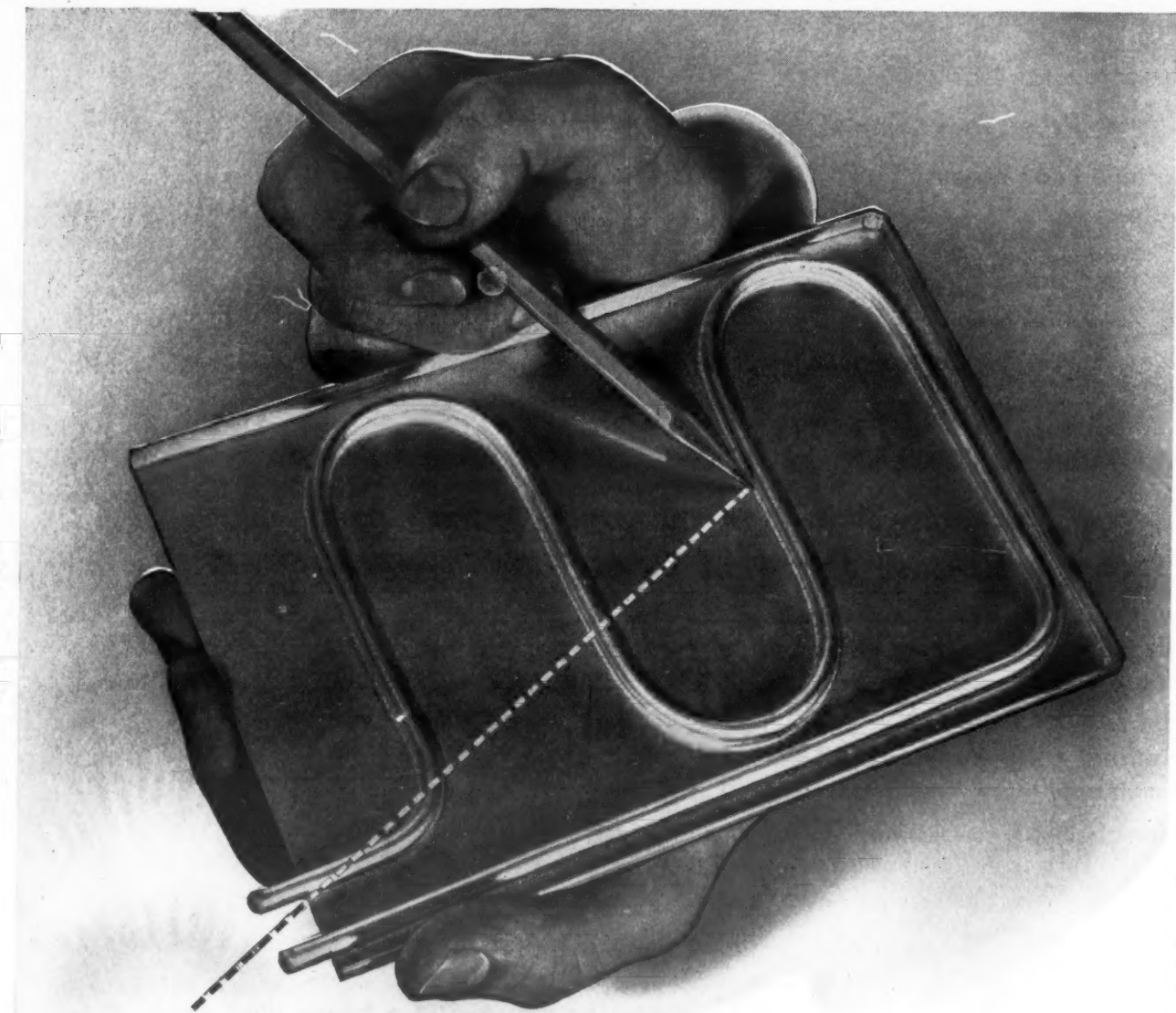


FOR PROFIT

YOU can go places with Tyler in the years ahead. The growing Tyler line meets today's—and tomorrow's—demand for self-service, frozen foods display, better design, better construction, better value! Write for complete line catalog today! Tyler Fixture Corp., Niles, Michigan.

TYLER
REFRIGERATORS

TYLER FROZEN FOODS
DISPLAY CASE—
open, self-service, wall-type



BRAZING removes an obstacle to rapid heat transfer

Brazing produces excellent joints, speeding up chilling and freezing by making it easy for heat to get out. Use this process in connection with aluminum—a superior heat conductor—and you have the answer to many of your heat transfer problems.

Manufacturers of wartime heat exchangers discovered this early, using furnace-brazed aluminum to obtain highest heat-transfer

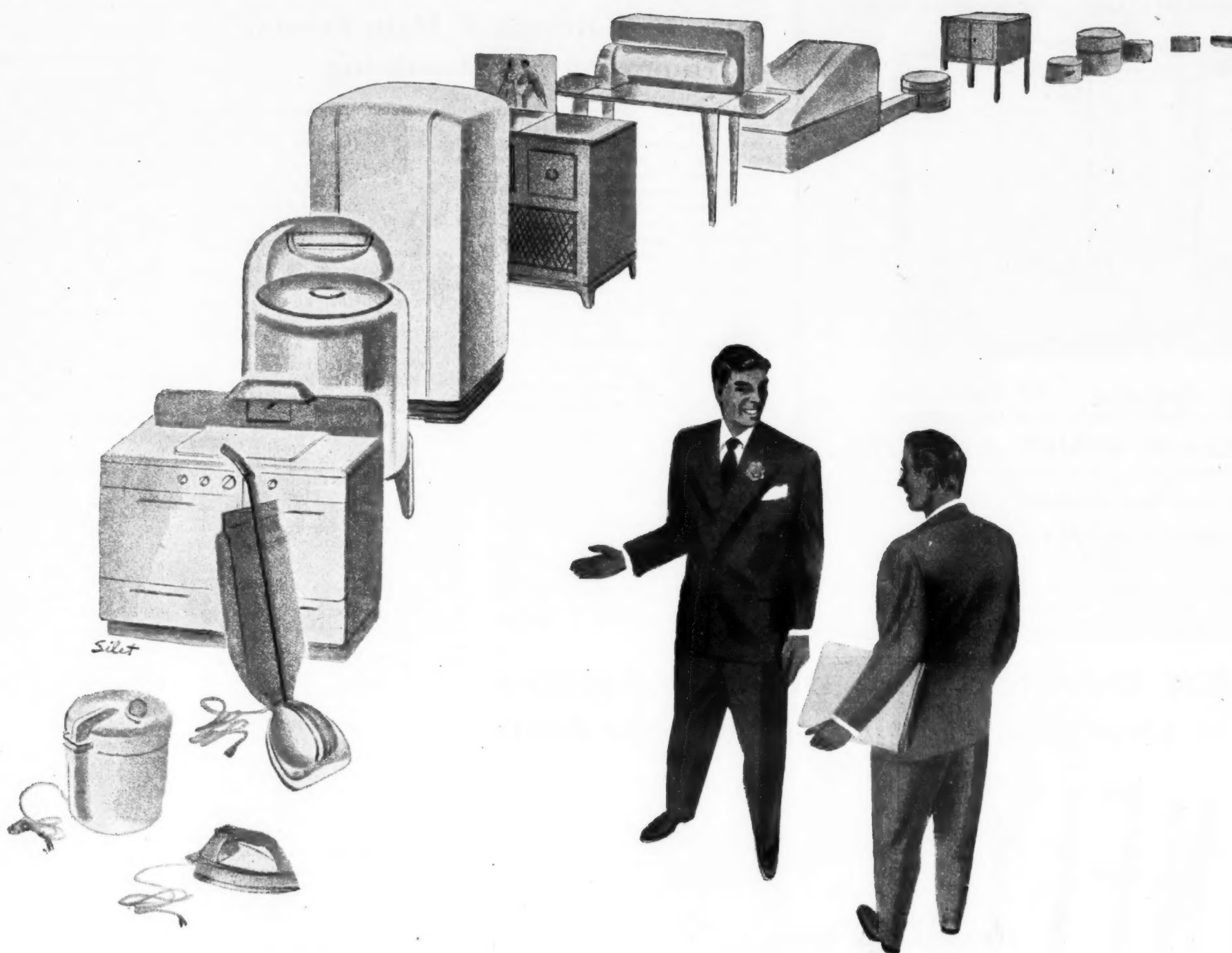
efficiencies. And they made extremely complicated assemblies which could not have been made by other methods.

Pictured above, you see aluminum tubing furnace-brazed to aluminum sheet, much as you might assemble a refrigerator evaporator, or condenser. Tubing and sheet are bonded into a single, solid unit by an aluminum alloy.

Does this suggest things to you? Alcoa's engineers can help you put your ideas into practice. ALUMINUM COMPANY OF AMERICA, 1975 Gulf Building, Pittsburgh 19, Penna.

ALCOA FIRST IN
ALUMINUM





Now—your postwar selling can start in *the \$4,496,734,000 Chicago Market*

You can start now to lay plans to cash in on the billion-dollar demand for autos, refrigerators, oil furnaces, and other "big unit" products in the Chicago market. Here is more business than you can find in some ten or fifteen entire states—enough business to absorb all or a substantial portion of your output.

The Chicago market is famous for its big volume purchases. It has repeatedly broken sales records. Favored by high, diversified income

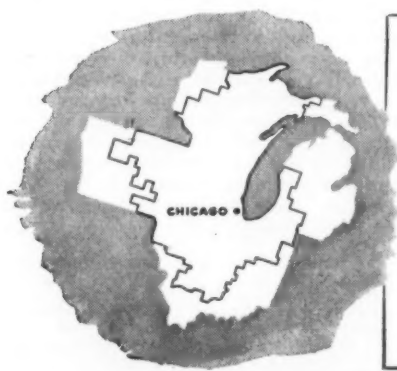
from farm and factory, backed by huge savings, it is reinforced against reconversion and is immediately responsive to selling.

Easily accessible to salesmen and factory shipments, the Chicago market can be sold at one low cost through a single medium—the Chicago Tribune. Daily, the families of this compact market turn to the Tribune as their first newspaper and chief buying guide. Founded when the midwest was being settled, the Tribune occupies a position unrivaled by any other medium. It is the only one which delivers the market-wide selling impact that gets dealer support and broad consumer acceptance.

One out of every three families in 756 cities and towns of 1000 or more population read the Tribune on weekdays. On Sundays, it is practically every other family. And not only is the Tribune the family medium, it is the dealer's medium—at one of the lowest milline rates in the United States.

Whether you get into production early or late here is a market and an advertising medium which offers the quick distribution and consumer buying you want, and can help you build solidly for a long-term, profitable operation. For market facts and merchandising help, call a Tribune representative.

The Chicago Area: strategically located . . . compact . . . fortified against reconversion problems . . . big enough to absorb all a factory can make.



Now available for your study and use are the findings of a market-wide dealer and consumer investigation revealing ownership of automobiles and electrical appliances, brand preferences and expected purchases. To get these facts, address C. S. Benham, Manager, National Advertising, Chicago Tribune, Tribune Tower, Chicago 11, Ill.

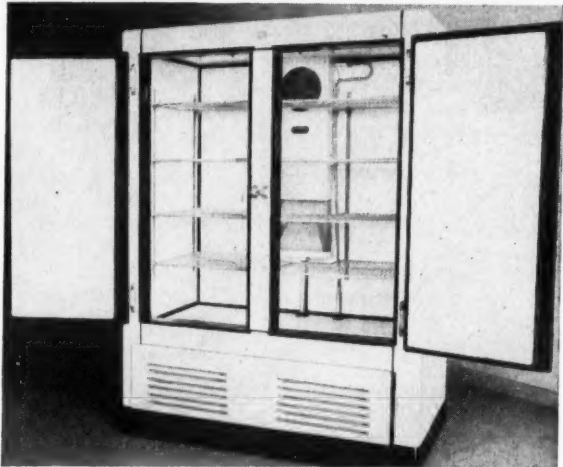
Chicago Tribune

THE WORLD'S GREATEST NEWSPAPER

November average net paid total circulation:
Daily, over 965,000; Sunday, over 1,300,000

Rogers REACH-INS

Now available! Get your order in today!



Model Illustrated - 30 Cubic Feet

Other Models from 17 to 72 cubic feet

PORCELAIN INSIDE AND OUT

Equipped with 1/3 H. P. Universal Compressor

Send for Folder No. 4

MODERN APPLIANCE CO.

1355 MARKET ST., SAN FRANCISCO 3, CALIFORNIA

Those attending Market Week (S.F.) Feb. 5th to 10th
See our display at the Merchandise Mart

How Dealers Are Preparing Now To Do a Better Sales Job Later

Interviews Reveal '8 Main Points' In Improving Merchandising

MANSFIELD, Ohio—There are eight major points which smart electrical appliance dealers are concentrating on in their plans for doing a better job in the postwar era. I. Frank Brownson, manager, laundry equipment department, Westinghouse Appliance Division, says he found on a recent extended trip to dealer establishments through the country.

These eight points, and Mr. Brownson's comments on them, are:

Guarantee Volume?

Point 1. Decide what lines of merchandise you will carry and establish your sources of supply now.

In connection with this, some retailers are voluntarily offering to assume an obligation for providing a certain pre-determined sales volume for their suppliers. The motive which prompts this is their desire for more selective dealer representation on a given brand name. They want as little competition as possible on the brands of appliances which they represent in their community and are, therefore, desirous of working with their suppliers to determine

what volume of sales the supplier must secure in a given area, and how much of this they will be able to produce.

Point 2. Proper Display.

Most retailers could materially increase their sales by just improving their display of appliances. Even big department stores, which have always emphasized display, have found their efforts in this direction so well rewarded that this is one part of their sales activity for postwar which will receive great additional emphasis.

There are many things that are being planned for outstanding displays in the postwar period, but there are generally two basically important ones, namely:

Mass displays of complete lines of merchandise, so arranged that they enhance the inherent beauty of the appliance itself. This, of course, means proper grouping, proper lighting, and proper background for the appliances in both window and store displays. In other words, displays for eye appeal.

Next, functional displays. By functional displays I mean the proper installation, on your sales floor, of appliances so that they can be demonstrated. The range and refrigerator properly hooked up so they can be used the same as they would in the home. Laundry equipment, including the new automatic washers, properly installed so an actual washing can be done.

Home Freezers, when they make their appearance on the market, should be properly hooked up so that actual foods can be frozen in them and displayed. Such smaller items as automatic toasters can be sold far more effectively by letting a prospect actually see how nicely it makes a piece of toast. This functional display will play a very important part in the sale of appliances for aggressive retailers and these displays are being planned in great detail right now.

Training, Paying Salesmen

Point 3. Proper Selling Organization

To properly sell appliances, you must have separate appliance salesmen. Few salesmen can do a proper selling job when they have to wade 5 pounds of ten-penny nails on minute and sell an electric toaster the next.

Training the salesmen is important. There is no store so small even the one-man operation, that they cannot have regular sales training periods. In sales training the ideal method is, of course, regular morning sales meetings, which are held by the man in charge of appliance sales, where new ideas are discussed along with the previous day's activities and plans made for the current day's operation; where suppliers and manufacturers' representatives are asked to be present to help formulate sales programs.

Ask for sales training help from the representatives of the manufacturers who make the products you sell and from the representative who directly supply you with those products. There will be a great demand for this kind of help in sales training from all retailers, so the competition for the time of the people who can help you with this job will be keen. Don't be backward about demanding this help.

Institute an incentive plan. It is not only important that you have some kind of a plan of remuneration for your appliance sales department but it is important that you have some incentive for your regular hardware salesmen. Make it worthwhile for your regular hardware salesmen to keep their eyes open for appliance prospects which should be turned over to the appliance salesmen to sell. Give the appliance sales department an incentive based on "the more you sell the more you earn," preferably not straight commission.

Point 4. Advertising and Promotion

Dealers should not depend on their own ingenuity in developing advertising and promotion programs. Use advertising layouts and ideas for customers, (Concluded on Page 7, Column 1)

To Top ALL Development and Production Records In Structural Plastic Refrigerator Parts

PANELYTE*

Has To Top...
ONLY Its Own Records!

WITH its original Breaker Strip, back in 1930, PANELYTE started to be — and has since stayed — a record maker in the design, development and mass production of structural resinous laminated parts for the refrigerator industry.

PANELYTE now offers an exclusive odorless laminate. It is 40 times less odorless than the PANELYTE grade known as "the best" in 1940.

Breaking all records in the refrigeration field has been PANELYTE Procedure for the past 14 years. We have matched the color on any exterior and interior refrigerator part when requested. Where volume warrants, we will match and mold any color required.

Today PANELYTE is ready and eager to work with you in designing and development work looking toward the post-war mass-production of more efficient and economical structural parts for refrigerators, home freeze and frozen storage units

Here are a few other record PANELYTE "Firsts"

- An odorless laminate for use in Breaker Strips.
- White and colored Breaker Strips, rapidly replacing black.
- Curved and formed Breaker Strips in enameling stock or curved molded surface, in colors, offering many advantages over the flat type.
- A thermosetting plastic for Inner Doors to which synthetic baking enamels can be efficiently applied by a technique similar to that used with steel.
- The mass production of Inner Doors in any desired shape or design.
- One-piece Breaker Strips, flat or curved. Horizontal piece can be incorporated to seal off freezing unit.
- Low-cost Backer Strips for tank hangers, mounting blocks and any structural applications requiring an odorless, easily fabricated part.

Write for factual Data Book!

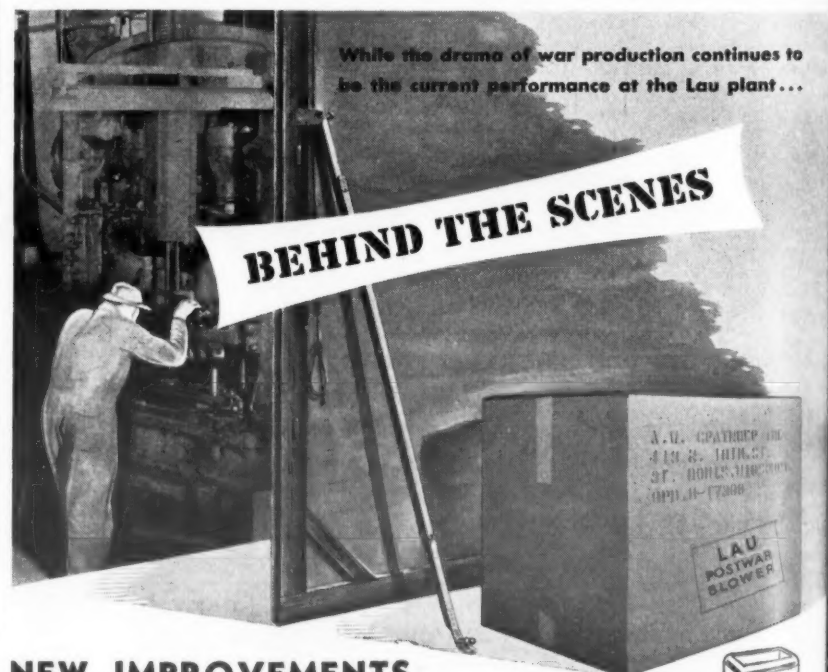
PANELYTE

the structural plastic

PANELYTE DIVISION
ST. REGIS PAPER COMPANY
230 PARK AVENUE
NEW YORK 17, N. Y.

Sales Offices: Atlanta, Boston, Chicago, Cincinnati, Cleveland, Dallas, Denver, Detroit, Kansas City, Los Angeles, Mexico City, Montreal, New Orleans, Phoenix, St. Louis, St. Paul, San Francisco, Seattle, Syracuse, Toronto, Trenton, Vancouver

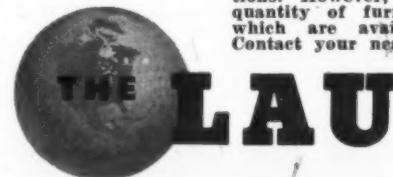
* MASS PRODUCTION OF SHEETS, RODS, TUBES, MOLDED FORMS, FABRICATED PARTS IN PAPER, FABRIC, FIBRE GLASS, WOOD VENEER AND ASBESTOS BASE LAMINATES.



NEW IMPROVEMENTS IN LAU BLOWERS await our presentation to a peacetime audience

We'll divulge all the details of recent Lau Blower improvements the moment the lid is off present-day restrictions... when our government and war-essential contractors to our government no longer require the limits of our production. Lau Blowers which you will be able to obtain after the war will have new scroll dimensions—improved wheel design and performance—and they'll be obtainable at still lower costs as a result of Lau straight-line mass production. Look to Lau to continue to lead in the blower field. If you now are planning your postwar equipment including blowers, be sure to contact us so that we can keep you posted regarding our product development.

The majority of Lau Blower equipment is going into direct and indirect war applications. However, we are producing a limited quantity of furnace blower package units which are available on proper priority. Contact your nearest Lau jobber.



LAU BLOWER COMPANY
DAYTON 7, OHIO, U. S. A.

WORLD'S LARGEST MANUFACTURER OF FURNACE BLOWERS
Engineers and fabricators of general Air Handling Equipment
Single Inlet and Double Inlet Blowers • Propeller Fans • Accessories

Wise' Dealers Plan Now To Improve Their Operations

(Concluded from Page 6, Column 5)
Promotion from your suppliers and the manufacturers of the products you sell.

Above all, demand from your suppliers the national magazine and newspaper schedules of the manufacturer of the products you represent that you may make a local tie-up focus attention on the fact that these products which are being talked about in national magazines and daily newspapers are for sale in your store.

Be regular in your advertising. Plan your schedule ahead so your advertisements are well thought out in advance. Don't run one big advertisement today and then not advertise for two weeks. It's the steady stream of message that gets results.

Distributors and manufacturers to be worthy of your support, should apply you with many sales-getting ideas to promote your business in your locality, which have been time tested and tried under circumstances identical to yours. Again, in the postwar period there will be plenty of competition for this type of help.

Meet Your Banker

Point 5. Financing.
Have your customers make payments in your store. Regardless of how you finance, whether you carry your own paper, discount it with your bank or a finance company, make arrangements to handle your own collections. Educate the person who receives the money from your customers as they make their payments to call attention to their items.

Carefully watch your time payment accounts and don't let them get off your books. When an account on one appliance is within a few months of being paid up, sell them another appliance and pro rate balance over the new purchase. This idea, properly developed, will come very profitable.

Take your banker into your confidence on your plans for promoting appliance sales. If possible, tie your local bank in with your efforts. Do whatever you can to make it evident that your local bank or banks approve of time-payment sales. Many customers, particularly in smaller localities, believe that banks frown on installment buying. Try and get your particular bank or, if possible, the local banks to indicate in some way that they believe in installment buying. This has a good psychological effect.

Point 6. Post Sale Demonstrations.
Post Sale demonstrations are not an expense. They are an investment which pays very handsome dividends. Post sale demonstration in the customer's home is the best and quickest way to make sure that your new customer gets off on the right foot as a satisfied user, and is thereby anxious that you sell her friends.

If the individual sales volume of a particular dealer does not warrant a special demonstrator, as many of them will not, develop a person who is part time demonstrator and part time something else. Your suppliers will help you accomplish this.

A good point is that every major appliance sale be considered incomplete until a home demonstration is made. It is good business, when convenient, to visit the person who has purchased a small appliance because this affords an opportunity of going into the home and making a survey of all of their electrical equipment.

'Waked Up' on Service Dept.

Point 7. Service.

There was a time when service on appliances was considered a necessary evil. The war has changed all that. Many appliance dealers with nothing to fall back on in the way of merchandise when appliances were no longer available, organized service departments. These have proved to be very profitable and have made many friends and potential postwar customers.

Many of these service departments were instituted and organized after service equipment and tools became very scarce and trained service men became almost impossible to secure. If, under such wartime handicaps, these dealers were so successful, think of what can be done in postwar when all kinds of modern tools and equipment are again available at reasonable prices and thousands of young men with good, technical training are available.

Point 8. Coordination.

You can plan for all seven of the points just discussed and yet operate at something a great deal less than 100% efficiency unless there is proper coordination of all efforts and activities. The prime objective of all the points I have discussed is to increase sales volume. Therefore, all these activities should be coordinated under the leadership of that one person in charge of appliance sales.

Schwartz Promoted By Frigidaire's Agency

CHICAGO—Foote, Cone & Belding, advertising agency, has announced the election of three vice presidents—Milton H. Schwartz, A. J. Bremner, and John F. Hunt—from the executive staff of its office here.

Mr. Schwartz is creative boss on the Frigidaire division of General Motors Corp. account, and account executive on Majestic Radio & Television Corp. He was connected with Lord & Thomas for over a decade and is well known for his advertising background in public utilities and banking. He is a graduate of the University of Illinois.

Dresser Gives Details on Day and Night Acquisition

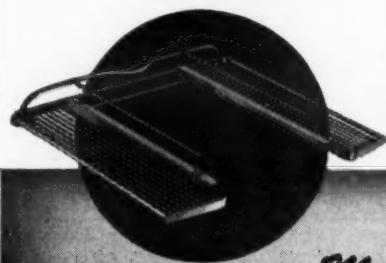
CLEVELAND—Edwin M. Daugherty, California state commissioner of corporations, has issued his permit, authorizing Dresser Industries, Inc., to issue 78,209 shares of Dresser common stock in connection with the acquisition by Dresser of three southern California companies.

The companies are Day & Night Mfg. Co., Monrovia; Payne Furnace & Supply Co., Inc., Beverly Hills; and Kobe, Inc., Huntington Park. Dresser Industries, Inc., is an affiliation of companies with kindred interests, complementary products and related markets, operating principally in the gas and oil industries. The reorganization plans will be submitted to stockholders of the three companies immediately. Special meetings of Payne and Kobe stockholders are being called for Jan. 30.

Day & Night stockholders will receive one share of Dresser common stock for each five and one-tenth shares of Day & Night 6% preferred; one share of Dresser common for each four and nine-tenths shares of Day & Night 7% preferred. And one share of Dresser common for each three shares of Day & Night original preferred. For each one share of Day & Night common, holders will receive one and one-tenth shares of Dresser common.

The transaction is contingent on acceptance of the Dresser offer by the holders of not less than 95% of all Day & Night common shares, not less than 95% of Day & Night original preferred, and not less than 80% of all shares of Day & Night.

**STAINLESS STEEL
SHELVES FOR MANY
YEARS HAVE PROVED
THEIR ECONOMY
AND DEPENDABILITY**



**WALL WIRE
PRODUCTS
COMPANY**

11333 GENERAL DRIVE
PLYMOUTH, MICHIGAN

Makers of STAINLESS STEEL AND
RETINNED REFRIGERATOR SHELVES AND WELDED WIRE PRODUCTS

PRECISION COOLING

**makes it better!
keeps it better!**

There can be no "margin of error" in controlling temperatures for frozen food processing and storage. Honeywell controls are designed to provide the extra sensitivity which is your insurance against spoilage and waste. Your Honeywell branches and jobbers are anxious to help with your control problems. Call them or write Minneapolis - Honeywell Regulator Company, 2807 Fourth Avenue So., Minneapolis 8, Minnesota.

MINNEAPOLIS
Honeywell
REFRIGERATION CONTROL SYSTEMS

WEBER *first*

IN PEACE...WAR...POST-WAR

Commercial Refrigeration,
Soda Fountains, Ice Cream
and Frosted Food Cabinets

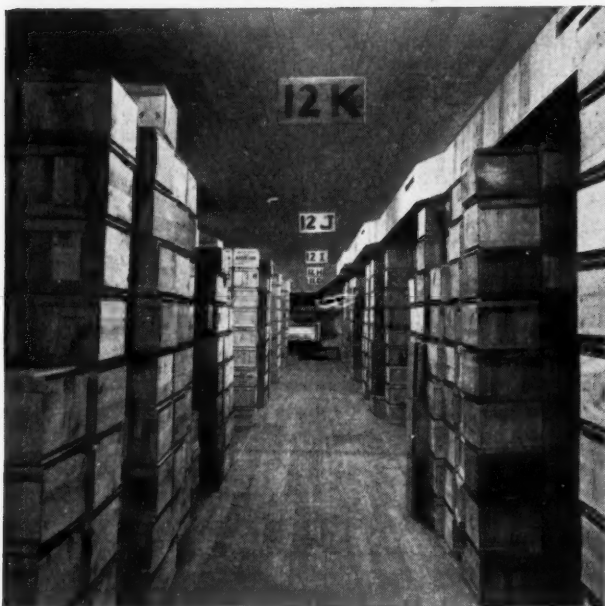
Investigate the country's
most complete line of
commercial refrigerators,
soda fountains and Ice Cream
and Frosted Food Cabinets
before you make any post-war
sales plans.

PLAN NOW TO SELL
THE WEBER LINE INSTEAD
OF SELLING AGAINST IT
Write today for data con-
cerning the details of Weber
distributorships. This fran-
chise will make real money
for those concerns who can
qualify.

WEBER SHOWCASE &
FIXTURE CO. INC.

5700 AVALON BOULEVARD • LOS ANGELES, CALIFORNIA

Extra Capacity and Improved Operation in PRE-COOLING, FREEZING, OR STORAGE



PATENTED

NIAGARA

EQUIPMENT FOR FOOD INDUSTRIES: AIR CONDITIONERS, DEHYDRATORS, COOLERS, "NO-FROST" METHOD OF PRE-COOLING, FREEZING AND HOLDING, AERO HEAT EXCHANGERS, "DUO-PASS" AERO CONDENSERS

● The NIAGARA "No Frost" Method is helping many refrigeration users by providing increased capacity without an additional compressor installation. It also reduces operating difficulties and saves manpower by giving constant full capacity in refrigerated rooms without interruption for de-icing cooling coils.

By giving more trustworthy control of temperatures, and by overcoming "live loads" quicker, it helps hold first-grade quality in refrigerated or frozen foods.

Write for full information showing the results of NIAGARA "No Frost" applications to a great variety of refrigeration uses, including extreme low temperature installations. Descriptive bulletin showing applications and operating details will be mailed on request.

NIAGARA BLOWER COMPANY

"25 Years of Service in Air Engineering"

NEW YORK ADDRESS: Dept. AC 15

6 E. 45th Street, New York-17, N. Y.

Field Engineering Offices in Principal Cities

Back the Attack — Buy War Bonds

POWER PIONEER



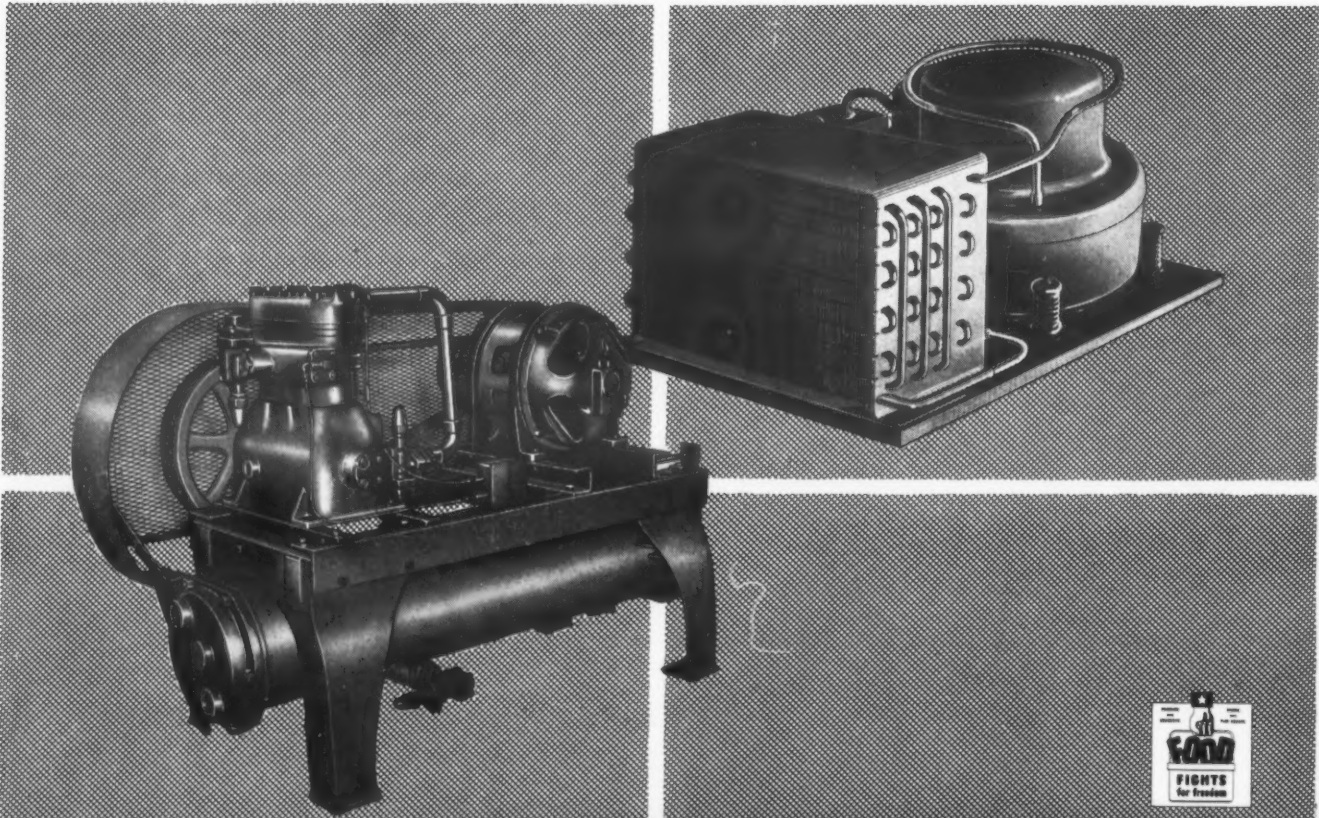
IN A GREAT YOUNG INDUSTRY

Universal Cooler is ready for the bright future of locker storage and the entire frozen food industry.

Universal Cooler refrigeration units—in a complete range of models—are worthy of the job which will be expected of them. They are compactly built, economical in operation, advanced in design, test-proven and backed by nearly a quarter century of achievement in refrigeration. Everywhere, more and more fixture manufacturers and locker operators are saying:

"Let's Buy Universal Cooler"

HERMETIC, SELF-CONTAINED OPEN-TYPE, REMOTE-TYPE REFRIGERATING UNITS, 1/6 TO 25 HP
For Locker Plants • Retail Store Freezers • Home Freezers • Farm Freezers



UNIVERSAL COOLER

UNIVERSAL COOLER CORPORATION • Automatic Refrigeration since 1922
MARION, OHIO • BRANTFORD, ONTARIO

YOUR WAR BONDS ARE STILL URGENTLY NEEDED • KEEP BUYING AND HOLD THEM

The same skillful planning, research and testing facilities, and engineering know-how that have made Universal Cooler's postwar preparedness possible are at your service right now, on your own individual problems in refrigeration and quick freezing. Simply ask for an analysis by a Universal Cooler Field Engineer. No obligation, of course.

A Visitor From Iraq Picks Up Some Pointers



Following his participation in the recent international business conference at Rye, N. Y., where he headed the Iraq delegation, Said Hafidh Al-Kadi traveled to Detroit to discuss postwar business prospects with Norge officials. He is shown here with Howard E. Blood, Norge president, who is explaining a detail of the "rollator" refrigerator mechanism, while Arch Black, export manager, and M. G. O'Harra, vice president in charge of sales, look on. Said Al-Kadi is Norge distributor in Iraq and Iran.

Appliance Makers Who Were at Mar Predict Long Delay In New Items

CHICAGO — The hundreds of dealers, distributors, and buyers at this year's Winter Furniture Mart were all men badly in need of merchandise. Their invitations, announcing the Mart's opening on Jan. 4, specifically asked them not to come unless absolutely necessary.

But most of the nation's stores have had no appliances for three years, and the furniture available has been either very scarce or second-line merchandise. Thus, opening day attendance this year was the biggest in the history of the Mart, said Lawrence H. Whiting, president of the organization.

Estimates of the interval between armistice and appliance production, however, were conservative. Most of the major companies would guess at no less than three to six months for civilian production of those appliances now being made for the armed forces, and nine to twelve months for those requiring retooling from scratch.

The brief story on the opening of the Mart in the NEWS for Jan. 15 covered the displays of a few of the major appliance manufacturers. But these (Admiral, Frigidaire, General Electric, Nash-Kelvinator, Norge, Westinghouse) were only a small number of the appliance lines represented.

Crosley Corp. had its last 1942 refrigerator on deck, and the Coolerator Corp. display indicated the company's plans to enter the electric refrigeration field after the war. The Ice Cooling Appliance Corp. was similarly posted on postwar commercial refrigeration plans.

Among home freezers displayed were Amana (Major Home Appliances Co.), Deepfreeze (Motor Products Corp.), and Freez-All (Portable Elevator Mfg. Co.), and the Quicfreez and Ben-Hur farm freezers (Sanitary Refrigerator Co.).

Gibson refrigerators, Philco radios, and Bendix home laundries were featured in the exhibits of those companies, and Landers, Frary & Clark showed various units in their Universal appliance line.

All these were presented as strictly prewar items that will re-enter the field after the more immediate business of war has been disposed of.

Suspended For Diverting Housing Project Units

CHICAGO—Thomas J. Boyer, 8518 South Ashland Ave., Chicago, a general building contractor, charged with illegal diversion of 31 new domestic mechanical refrigerators from defense housing projects, faces a three-month loss of material allocations and priorities assistance under terms of Suspension Order S-676, the Compliance Division of the War Production Board reported today.

The suspension order, effective today, and until April 13, 1945, is based on a violation of WPB Supplementary Limitation Order L-5-d, which restricts transfer of new refrigerators and establishes procedures for obtaining them.

Many of them are being produced now, but not in chrome and spotless white, for the armed forces. And the very presence of the display promised better appliances and continued high standards after the war is over.

Get Representation Now In INDIA

One of Your Most Important Postwar Markets

India's expanding industries offer manufacturers one of the world's richest, most profitable postwar markets.

In order to intelligently cultivate this huge market, you must be represented by an Indian firm familiar with all phases of sales and merchandising—and alert to the needs of India!

Our firm has headquarters in Bombay, the heart of industrial India, with branches throughout India and the East. We are thoroughly familiar with the engineering and application of air-conditioning, heating, ventilating and refrigeration. We offer you the best possible representation for your products. Write today.

A. J. Patel Ltd

Distributors and Representatives
195 Hornby Road, Bombay, India

Address inquiries to A. J. Patel
Dayton, Brice & Co. Ltd.
1 Park Avenue, New York, N. Y.

Inside Dope

By George F. Taubeneck

(Continued from Page 1, Column 1)

ton plant of the C. V. Hill Co., well known commercial refrigerator manufacturing concern. The clipping follows:

"When it comes to devotion to duty, no be-ribboned veteran of the battle fronts can adopt a patronizing air in the presence of Mrs. Ethel Misiewicz, 24, of 49 Monroe St., Trenton.

"For yesterday—because she thought she ought to stick to her war job until the last possible minute—the sturdily built young woman reported for work at Trenton's C. V. Hill Refrigerator Co. plant at the usual time, although she knew her baby might be born at any minute.

"Two hours later, at 10 a.m., Mrs. Misiewicz hurriedly summoned the plant nurse, Margaret Mudry, and Miss Mudry assisted her into the woman's rest room. There the child, a boy, was born. Police sent an ambulance to take mother and son to Mercer Hospital, where physicians last night said both were doing fine.

"To a nurse who asked her gently why she had gone to work with the birth of the baby so obviously imminent, Mrs. Misiewicz replied: "My husband was killed in France."

Fund for Baby

Mr. Swarthout encloses a dollar bill with the suggestion that the NEWS start a fund for the "refrigerator baby."

Inasmuch as this baby will never see its father, we're heartily in favor, and add our dollar bill to the fund. How about a March of Dollars for the Refrigerator Baby?

All contributions will be held here until a worthy fund has been accumulated, after which Mrs. Misiewicz will be presented with the purse.

Taps for a Pioneer

Another leading figure in the industry has passed away. M. R. Carpenter, Cleveland refrigerating engineer noted for his pioneering and leadership in the construction of ice rinks, died in his sleep at home Jan. 13.

At various times Mr. Carpenter was a refrigeration engineer with the Creamery Package Co., the Triumph Ice Machine Co., and the Springer-Wood Co.

Among his developments were the shell type brine cooler, a flow control system for brine circulation, the Carpenter monolithic floating floor, the Carpenter system of floor piping and connections for ice rinks, and the Carpenter ice planer.

Writes his wife:

"Mr. Carpenter had not been ill—just a case of overtaxing his strength. Two years ago he felt that with his background he could make a worthy contribution to the war effort, which he did. He did the work of two or three men Friday, and it was simply too much.

"I had begged him to slow up, and he assured me that he soon would. He was a noble soul."

C.E.D. News

Five steps to meet problems of the nation's unemployed in the transition period of conversion from war to peace economy are recommended in a study just completed for the Committee for Economic Development:

1. Unemployment compensation, as the chief means for providing for workers during the transition, should have its coverage extended and its benefits increased.

2. Employers should plan postwar rehiring as far ahead as is practical, using as many of their employees as possible during transition on maintenance, repair, alteration, and development work.

3. Short term education and basic training courses, both general and vocational, should be available without cost to the jobless, with federal funds matching those raised for this purpose by states and localities.

4. State and local public works programs should be planned now, for use when needed.

5. Congress should enact a program of federal grants to the states for general assistance on a matched basis, similar to that used in federal-state payments to the needy aged, the needy blind, and to dependent children.

The Newest and Finest
ELECTRIC WaterCoolers

ALL SIZES FOR NAVY AND LAND USE

EXCLUSIVE DEALER FRANCHISE

THE REVELATION CO.
L. E. RABOHN
2801 San Fernando Rd. Los Angeles 41, Calif.

Fahrenheit

Cools Air-Warm Bottles
in 10 minutes to 45°
in 15 minutes to 35°

Lead Crystal handblown
9" x 1" cork jacket handturned
\$22.00

(West of Denver \$22.50) Retail (Fairtraded)
U. S. PATENTS 2,075,831; 2,163,568
Trademark Registered U. S. Patent Office.

Mr. Dealer:

Wherever you sold a refrigerator you can sell a Fahrenheit as accessory. Uses 1 tray of ice plus ordinary salt to cool Quart Bottle in record time.

Ideal ice cube pail. Holds ice overnight.

Women love its beauty,
Men its utility.



Immediate
Delivery

Dr. Peter Schlumbohm, Manufacturer
41 Murray St., New York 7, N. Y.

Copyright 1944.

INTERCHANGEABLE PARTS

IN POST-WAR M&E
CONDENSING UNITS



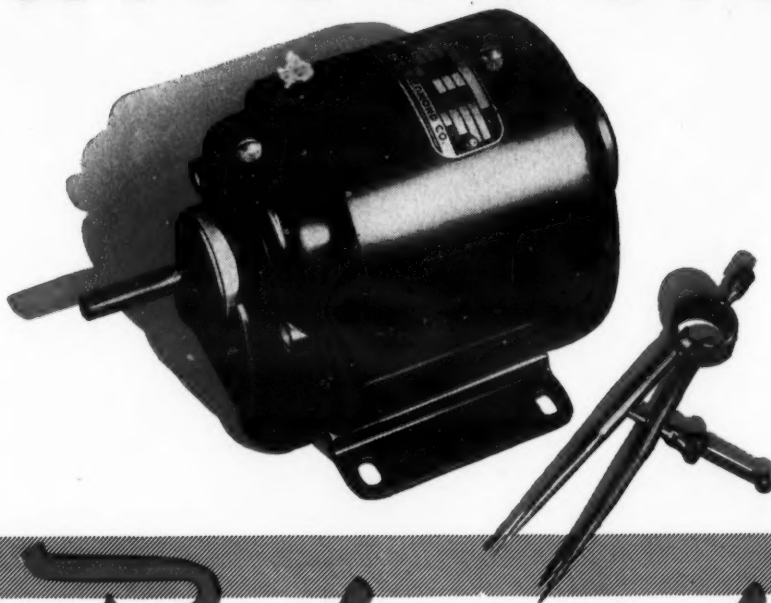
• A feature that supplements our previously announced simplification of valve plate and crankshaft. New M & E fractional H.P. models, including 1/4—1/3—1/2 & 3/4 H.P., will have interchangeable parts. This will be of great interest to both the user and distributor of M&E Compressors since it reduces essential inventory and further simplifies servicing.



Advance Inquiries Invited
MERCHANT & EVANS CO.
2035 WASHINGTON AVE., PHILA. 46, PA.

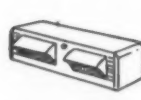
CONDENSING UNITS • FIN-TYPE COIL PRODUCTS PLANT: Lancaster, Pa.

PRACTICAL



Redmond MICROMOTORS

For Air-Conditioners, Heaters, Ventilators, Display Coolers, Agitators and Ranges



NO GUESSWORK HERE! For continuous duty jobs up to a twenty-fifth horsepower Redmond shaded pole A C Micromotors are engineered to meet your particular requirements.

They're practical little power plants because they're built to last, because they're thoroughly dependable, and readily adaptable, because

Micromotors are neat in appearance, compact and quiet running.

You should learn all about their Flush-Weld rotors, Pressure-Locked rubber mountings, Air-Stream cooling and super-capacity lubrication.

Write us today for the complete story of these practical Redmond Micromotors.

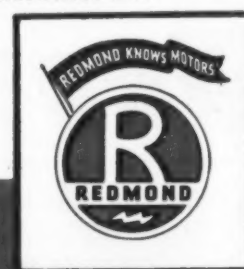
A. G. Redmond Company

OWOSSO, MICHIGAN, U. S. A.

Composite view of Redmond facilities with over five acres of floor area.



AC AND DC MICROMOTORS • DYNAMOTORS • CONTROLLERS • BLOWERS



New Distributing Firm Formed In Harrisburg

HARRISBURG, Pa.—Formation of the firm of Jules Alexandre, Inc., to handle the distribution in central Pennsylvania of products of The Crosley Corp. has just been announced by Jules E. Alexandre, president of the newly formed company.

Ben Eby, owner of the Eby Chemical Co. of Harrisburg, Pa., is vice

president of the firm.

The new company is successor to the firm of Golling-Alexandre, Inc. G. G. Golling, executive of the former firm, will not be associated with Jules Alexandre, Inc.

Jules E. Alexandre, president and general manager of the new company, had been vice president and sales manager of Golling-Alexandre, Inc., since September, 1943. Previous to that time, he was associated with Peirce-Phelps, Inc., Philadelphia.



"Walk In" COOLERS

AVAILABLE NOW TO BUYERS WITH PRIORITY... in any size or type. Amana's long experience in building "Walk-In" Coolers is assurance of efficiency and long service. Insulation of latest models is of corkboard or "Fiberglas" insuring extra economy and top cooling ability.

REFRIGERATION DIVISION
AMANA SOCIETY
AMANA, IOWA

Awarded the Army-Navy "E" with White Star for continuance of excellence in production of war materials.

No Matter How Frozen Foods Are Handled, Makers of Condensing Units Should Profit

So Says Walter Landmesser, Who Nevertheless Pokes Some Holes In Freezer Market Guesses

By W. E. Landmesser, Manager, Commercial Department, York Corp.

The writer has been connected with the refrigeration industry since 1922, but never in all that time has there been a subject that has created so much conversation, so many guesses, given rise to so many opinions, and has attracted the attention of so many manufacturers as has the subject of low temperature refrigerators.

Let us all hope that the vast amount of talk about quick freeze and low temperature cabinets will not turn out to be another case of the green farm hand who was told to feed the ducks. Some time later the farmer asked him if he had fed the ducks and he said, "Yes sir."

"What did you feed them," asked the farmer? "Hay," replied the farm hand. "My goodness," said the farmer, "did they eat that?"

"I don't know, sir, how much they are going to eat, but they sure were doing a hell of a lot of talking about it when I left them."

It is difficult to say or write anything that has not been said or written at least once by at least 10 people, so if any of the opinions expressed at this time have been stated before, don't bother to remind me—

it is purely coincidental. Furthermore, all opinions stated are personal and are not necessarily those of the York Corp.

There are two parts to the subject assigned to me and the first is "What Will The Quick Freeze or Low Temperature Box Do For The Condensing Unit Business?" That is a reasonable question and deserves a reasonable answer.

The condensing unit business will be favorably affected all along the line.

1—Food Processors with large plants will undoubtedly determine to hold their place in the sun... will watch public reaction closely and expand their facilities accordingly. This will make business for manufacturers of refrigerating equipment.

2—Transportation to warehouses must be accomplished either in refrigerated railroad cars or refrigerated trucks—either one or both means business for the manufacturers in our industry.

Warehousing Facilities

3—Warehouses must be refrigerated in which to store the processed foods both in and out of peak seasons. Here again is one more favorable effect upon the business of our industry. Some will say such facilities are already more than sufficient, but that has been said many times in the past in relation to other situations. There will be new business from this source.

4—Transportation from warehouses to retailers and wholesalers must be provided through the medium of refrigerated trucks. Wartime experiences of manufacturers in this industry will add both knowledge and impetus to create these needed facilities—all of which will require the products of our industry.

Retailers May Use More

5—Retailing in thousands of stores will require Dispensing Cabinets. This business will become available to manufacturers of refrigerating machines as fast as the frozen food business is developed by processors and accepted by the public on a big scale. You may be sure this will happen.

Furthermore, retailers will require in many instances, low temperature storage facilities in addition to dispensing cabinets. These facilities will take the form of low temperature rooms in many instances and cabinets of large sizes in many others. Here again it is obvious that new refrigeration equipment will be required.

6—On The Premises Food Servers such as hotels, restaurants, institutions, and others will require and purchase low temperature equipment for the storage of their requirements.

Transportation to Homes

7—Transportation To Homes from both retailers and wholesalers will require refrigerated trucks. Many will say such trucks will be refrigerated with dry ice. That remains to be seen, or should we say it depends upon the ingenuity of refrigeration equipment manufacturers to develop this phase of the business.

8—The American Home will be the deciding factor in this whole subject. Here the vast opportunity will rest upon the kind of job the refrigeration industry is prepared to perform in cooperation with the food processing industry of our country. The household low temperature cabinets will surely be the source of much business for manufacturers of condensing units and allied products.

These eight phases of the frozen food business—from processors to the American Homes—generally cover the channels that will be tapped for condensing unit business that may run into large figures. However there is one other that must be brought into the picture at this time—it is:

9—The Farm Freezer which will bring new measures of increased living standards to the farm home.

Even to a greater extent than in the other homes of this country, the farm freezer will mean not only better living with savings, but more time freed in the daily routine of the farm home.

Personally, I believe the farm freezer in a farm home is a necessity, whereas it can be considered more or less only a convenience or luxury item in the non-farm home. Remember, in the beginning I stated these opinions were personal. In any event many thousands of farm freezers will be sold... will create business for this industry.

Locker Plant Expansion

10—Another Way In Which Our Industry Will Benefit. The foregoing remarks pertained primarily to frozen foods from the large food processors to the American homes. However, there is another large and vitally important group of food processors who have carried the "banner" of frozen food service into more than 5,600 communities of this country. I refer to the locker plant operators who have done such a splendid food service to more than 1,750,000 families, throughout our land.

This great American business will grow even faster during the next few years. It will add millions more American families to the army of food lovers who appreciate better living at lower costs. These locker plants will process many millions of pounds of foods that will find their way into convenient low temperature.

(Concluded on Page 11, Column 1)

"...AND OUR NEW **Deepfreeze** WILL GO RIGHT THERE!"



YES! YOUR CUSTOMERS WILL "Go" DEEPFREEZE BECAUSE ONLY A DEEPFREEZE HAS 100% PRIMARY FREEZING SURFACE THAT HALTS FOOD DEHYDRATION

• Recent surveys prove that 11,918,000 Americans intend to buy home freezers as soon as they are available.

If you're selling Deepfreeze Home Freezing Units, then you'll be selling the home freezer that most people intend to buy!

Full-page national advertising by Deepfreeze is turning prospects into Deepfreeze buyers—telling them the strongest sales story of them all, the facts about the Deepfreeze and its exclusive, patented 100% Primary Freezing Surface.

More and more able-to-buy customers are learning what the Deepfreeze 100% Primary

Freezing Surface means: a solid wall of direct-action freezing surface that maintains a temperature differential of less than 2 degrees between food storage barrel and refrigerant. This prevents air circulation within the Deepfreeze, prevents air from picking up food moisture, keeps foods farm-fresh far longer.

No postwar experiment, the Deepfreeze principle has been thoroughly proved by the performance of the thousands of Deepfreeze Home Freezing Units serving America's homes since 1938.

Plan to cash in on the big swing to Deepfreeze that's coming soon. Write today.

Cartridge cases, airplane nose and tail gun turrets, blood desiccating units and industrial freezing equipment are among the war products that Motor Products Corporation is proud to be making to speed the day of Victory.

Deepfreeze

ONLY MOTOR PRODUCTS CAN MAKE A "DEEPFREEZE"

MOTOR PRODUCTS CORPORATION

Deepfreeze Division: 2480 Davis Street, North Chicago, Illinois

Main Plant: Detroit, Michigan

Canadian Plant: Walkerville, Ontario

MAIL THIS COUPON TODAY

Motor Products Corporation
Deepfreeze Division
2480 Davis Street, North Chicago, Ill.

Gentlemen: I am interested in getting full information regarding Deepfreeze postwar selling opportunities.

Name.....

Title.....

Company.....

Address.....

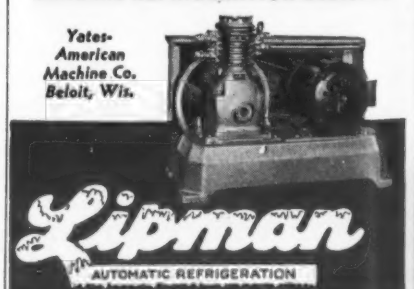


FOOD MUST BE CONSERVED

Refrigeration today is performing a vital service by guarding and preserving for future use, priceless food which might otherwise be wasted. Write for literature.

GENERAL REFRIGERATION DIVISION

Yates-American Machine Co. Beloit, Wis.



NEW 1944 CATALOG



Write for copy on your letterhead
Washing Machine Parts Catalog will not be issued in 1944

SERVICE PARTS CO.
2511 Lake St. Melrose Park, Ill.

Landmesser Says Freezer Business Will Go To Those Who Know How To Sell

(Continued from Page 10, Column 5)

ture storage space in the home, in the form of so-called home freezers or in the low temperature storage space in dual temperature domestic refrigerators. Thus rendering a vital service, the locker plant business will expand, thereby creating further business for this industry.

In addition the services rendered by the locker plants will be the means of inducing more families to install a home locker of the small sizes in which to store their purchases of frozen foods from the locker plants. Thus, more business for this industry.

First, it might be well to consider who will make them. From present indications it seems that just about every kind of manufacturer, from shipyards to cement mills, want to take a fling—even some refrigeration manufacturers have signified their intentions of getting into the business. Of course, many of our friends who have been manufacturing fixtures for years will want to utilize their experiences as well as facilities to get into the race.

From Nails to Freezers?

A few days ago a nail company inquired about prices on refrigerating machines. . . "he intends to go into the business of making low temperature cabinets because it looks to him like a big thing." Your guess is certainly as good as mine as who, among the more than 187 companies who have indicated their intentions to manufacture these items, will actually go ahead with their plans, or dreams. But there is one thing sure, nobody in that business will get lonesome.

Appliance Selling is a business profession. There are many types of selling. It takes one kind of technique to sell jewelry in the credit store, another in the grocery store. The business of selling frozen food cabinets will be, and is now, a specialty selling job that requires the skill of the pioneer. It will require training to teach men or women to go from door to door or store to store or institution to institution with the kind of story that will convince people that they should have or must have frozen food services in the form of low temperature cabinets.

What It Takes

To secure and train men or women will require organization both at the manufacturers' plants as well as in the field. Distributors and/or dealers must be secured. Then comes the battle for their time and attention, in competition with the many other things they will handle.

Across my desk have passed letters from jewelers, real estate operators, garage operators, automobile dealers, lighting engineers, cotton brokers, loan brokers, grocery stores,

contractors and builders, accountants, clothing store owners, general stores, and a score of others in addition to refrigeration and air conditioning dealers and distributors who have signified their intentions of taking on frozen food cabinets of one kind or another.

Never in this business has the pot of gold at the end of the rainbow seemed so close to so many. So at first you can expect just about anybody in any kind of business concern to take on a line and give it a whirl. All of which will doubtless wind up by burning the fingers of some and disillusioning others.

It is my personal opinion that after the first flush has passed and those who seek easy gold . . . find out that they really have to sell, there will be a lot of cut price deals and failures . . . then the freezer industry will settle down where it belongs—in the specialty selling field that includes in general the following types of outlets:

These, He Thinks, Will Last

1—Established and recognized refrigeration and appliance distributors and dealers, who are equipped with both specialty salesmen and service facilities.

2—Newly organized distributors and dealers who recognize the necessity for specialty sales methods and sound service to make happy customers and reasonable profits.

3—The big mail order houses such as Sears, Montgomery Ward, and others. They likewise will use specialty sales methods and provide service to their customers.

4—Locker plants—"with made to order" prospect lists comprised of their locker renters who already know and appreciate frozen food services and economy.

5—Department stores with sell trained sales forces who will work to take advantage of heavy store traffic, also outside selling.

6—The fixture companies who maintain their own retail outlets or utilize dealers and/or distributors . . . particularly on "Store Dispensing Cabinets."

7—Farm implement dealers . . . particularly on farm freezers.

8—Farm cooperative associations . . . memberships as prospect lists.

9—Power companies who will promote the sales primarily to add new loads to their lines. They will need such additional loads after Victory.

There are probably others, who will be equipped to train the necessary manpower and set up facilities to do the job. But this job will soon lose its glamour and attraction for those who reach for "the pot of gold at the rainbow's end" or hope to hold their hand out to catch the "golden eggs" as they come from the "goose," and find they have an omelet instead.

The refrigeration industry will benefit even though there may be some headaches for a while. It seems to me that those of us who plan to sell to any and all among the great number of manufacturers who will try a fling, have only two things to be much concerned about:

'Get Your Money'

1—Get your money.
2—Arrange to provide means of service in case of orphans.

As mentioned previously, there will be much weeding and sifting among those who will try their hand at retailing, but that is to be expected.

After a short haul, many of the boys will jump off the band wagon and then those who always get their rewards from a constructive selling job will remain to keep the band wagon moving.

There are as many guesses as there are people going into the business. There are formulas and survey calculations galore. So try your own hand at the great American game of guessing.

Personally I guess that in the first year after Victory, or complete release from restrictions, that approximately 300,000 to 350,000 "Home Freezers" of the small sizes will be sold to the American public.

He Estimates the Market

As for farm freezers, it is my guess that from 75,000 to 125,000 will be sold to the farm homes of America during the same period of time as indicated above. It is differences of opinions that makes horse races possible, so take your choice, or make your own guesses.

Anyway you look at it you can't lose if you work together to help promote the business with intelligence and integrity. It is a new business and no one can say it will not be a welcomed addition to our industry, as well as earn its way by contributions to better living.

Grandma Gets Credit For Frozen Pies

TORONTO, Ont.—A tremendous increase after the war in the use of frozen foods, cooked and uncooked, was predicted by Miss Alberta M. Macfarlane, educational director, National Restaurant Association, Chicago, who was in Toronto recently for the first annual conference of the Canadian Restaurant Association.

Remarking that the frozen cooked-food industry is still in its infancy, she added:

"Much research has still to be done, but I believe that in the not distant future frozen cooked food will be as common as frozen peas are today."

She pointed out that frozen chicken a la king, meat balls with spaghetti, etc., are already on sale in some of the larger United States cities, and added that restaurateurs in Canada have been experimenting with frozen cooked foods for years.

"Our grandmothers had the right idea when they made mince pies and

froze them, to be taken out and cooked whenever the family felt like having one," she continued.

R. J. Quinn President of Compressed Gas Assn.

NEW YORK CITY—Robert J. Quinn, of The Mathieson Alkali Works, has been elected president of the Compressed Gas Manufacturers' Association, Inc.

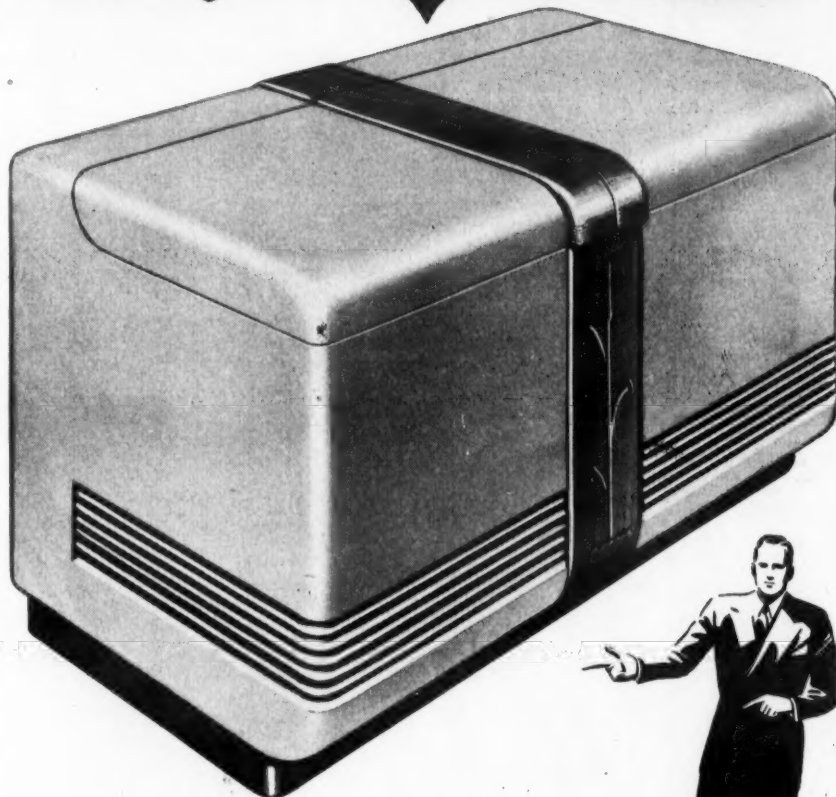
Mr. Quinn, the newly elected president, is assistant to the vice president-director of sales for The Mathieson Alkali Works.

Palmer In Westinghouse Advertising Post

PITTSBURGH—Andrew D. Palmer has been appointed assistant manager of general advertising in the public relations department of the Westinghouse Electric & Mfg. Co. In his new position, Mr. Palmer will be responsible for all youth advertising programs and will direct promotional activities of the Rural Electrification Section.

HERE'S YOUR FUTURE'S MOST PROFITABLE

Sales Leader



THE New BEN-HUR FARM and HOME Freezer

HOME FREEZERS promise you a future market conservatively estimated at 500,000 units a year! BEN-HUR will be ready to open this profitable market for YOU . . . with the new BEN-HUR FARM and HOME FREEZER.

Already laboratory tested, and proved under every possible operating condition — the product of famous artist designers and experienced refrigeration engineers, BEN-HUR FARM-HOME FREEZERS will be available in sizes for every family's need . . . a complete line that will suit every home.

Check your community now in both farm and urban homes. You'll find ready demand for the recognized advantages of home freezing and frozen storage — a waiting market that you can serve profitably with BEN-HUR FARM-HOME FREEZERS.



BEN-HUR distributors are being appointed now. Be sure you get in on the ground floor, write for details today.

BEN-HUR MANUFACTURING CO.
634 East Keefe Avenue Milwaukee 12, Wisconsin

BEN-HUR FARM LOCKER PLANTS

Less Servicing

WITH THE DFN SYSTEM!

—AND WHEN YOU DO IT'S FASTER, LESS EXPENSIVE

Freeze-ups, clogging and corrosion have three strikes against them when your installations are equipped with the DFN System. You get unmatched triple protection against moisture, sediment, and acid—reducing a major cause of shutdowns!

And when the drier is due for a change, you merely open the flange and replace the inexpensive DFN Cartridge. The shell stays on for repeated use. Each cartridge change multiplies your savings in time and parts.

Using the factory-packed hermetically sealed DFN Cartridge assures the correct quantity and density of dust-free drying and neutralizing agents in each charge. No danger of refrigerant by-passing due to loose packing. Exclusive DFN strainer-filter design filters to minute size, holds more sediment without pressure drop. For full information on how DFN can lick your drying problems, ask your distributor or write us direct.

McINTIRE CONNECTOR CO. NEWARK 5, N. J.



DEHYDRATES
FILTERS
NEUTRALIZES

FILTERS • NEUTRALIZERS

Only the

DEHYDRATORS • STRAINERS

ASE FROZ-N-FOOD LOCKERS

Increase your Profits . . .

... with a frozen food plant . . . a growing business the country over. But before you buy your lockers . . . compare A-S-E's Locker features. Here are lockers with features that assure you more profit . . . assure customer satisfaction. Before you buy, note their many advantages . . . their steel frame and body, the slide-easy drawers, the smooth door hinges . . . advantages that have won nation-wide preference for A-S-E Froz-n-Food Lockers.

Write for copy of catalog or for further information today.

ALL-STEEL-EQUIP COMPANY, INC.
430 GRIFFITH AVE. AURORA, ILL.

British Look To 'Built-In' Model For Postwar Use

LONDON, England—Intended for the postwar British home, many thousands of which must be constructed for homeless victims of Nazi bombings, a standardized built-in domestic refrigerator powered by a unit interchangeable as to make has been designed by the Domestic Electric Refrigeration Association, reports *Modern Refrigeration*, British refrigeration journal.

"Exhaustive research has demonstrated, and the experience of the members of D.E.R.A. has proved, that a refrigerator having a net capacity of not less than 4 cu. ft. is required as the minimum for the average household," it is stated.

"The external dimensions of the new refrigerator will be 21 inches wide by 19 inches deep by approximately 46 inches high and the net capacity 4 cu. ft. The complete cabinet is designed for 'building-in' as a kitchen fitment at service height, with cupboard space above and below, thus giving the utmost economy in floor space.

"Some of its features will be: large storage capacity; ample shelf accommodation; low running costs, fully automatic and interchangeable air-cooled unit; ice-making facilities.

"The air-cooled unit—that is, the complete cold-producing component which provides the refrigeration—is mechanically interchangeable as between different makes, and is a new development due to the cooperative planning of the members of D.E.R.A. It makes possible easy removal for inspection, and where necessary a replacement unit can be substituted in a few minutes; continuity of service to the user is thus insured.

"Having regard to the advantages offered by an electric refrigerator of not less than 4-cu. ft. capacity, the running costs are strictly economical. The current consumption is only about one unit per 24 hours," concludes the report.

British manufacturers of household units who participated in the design include: Coldaire, Ltd., Frigidaire, Ltd., General Electric Co., Ltd., H.M.V. Household Appliances (the Gramophone Co., Ltd.), International Refrigerator Co., Ltd., Kelvinator, Ltd., Marco Refrigerators, Ltd., and Pressed Steel Co., Ltd.

\$10 Million Expansion Program In Refrigerated Warehouses Forecast

Gains In Truck and Boat Hauling One Reason

NEW YORK CITY—Predicting a big postwar increase in haulage of perishable fruits and vegetables by trucks and boats, John Van Arnum, acting secretary and traffic consultant of the National League of Wholesale Fresh Fruit and Vegetable Distributors said recently that wholesalers of this produce will spend up to \$10,000,000 after the war to increase refrigerated storage facilities.

Before the war, when railroads were the leaders in the transportation of these perishables, wholesalers could let the produce remain in re-

frigerator cars until disposed of, if necessary, he said, but as trucks and boats expand their activities, wholesalers must make provisions to unload upon arrival.

Faster and more modern boats are expected in the coastal lanes after the war, but traffic men warn that these speedy boats will also want to turn around quickly, added Mr. Van Arnum.

Total carloads of produce originating on railroad lines made up 50% of the movement of vegetable and fruit crops before the war, he

said. Trucks carried 42% and coastal vessels 8%. In terms of ton-miles railroads accounted for 75%, trucks 20%, and ships 5%.

Expansion of truck and boat haulage will be affected by whatever improvements railroads make in protective facilities and operating schedules, declared Mr. Van Arnum. He doesn't consider air transportation as an immediate postwar threat to present transport facilities for perishables, except in hauling luxury items and off-season commodities.

Paul M. Williams, assistant chief of the fruit and vegetable branch, office of food distribution, War Food Administration, joined in urging more refrigeration. He said there is a 25% shrinkage in fresh fruit and vegetables between the shipping point and the kitchen of the consumer.

Matthews To Manage Wesco Calif. District

SAN FRANCISCO — Charles R. Matthews, prominent for the past 12 years in the electrical industry in the Seattle, Wash., area, has been named manager of the Northern California District of the Westinghouse Electric Supply Co., headquartered in San Francisco.

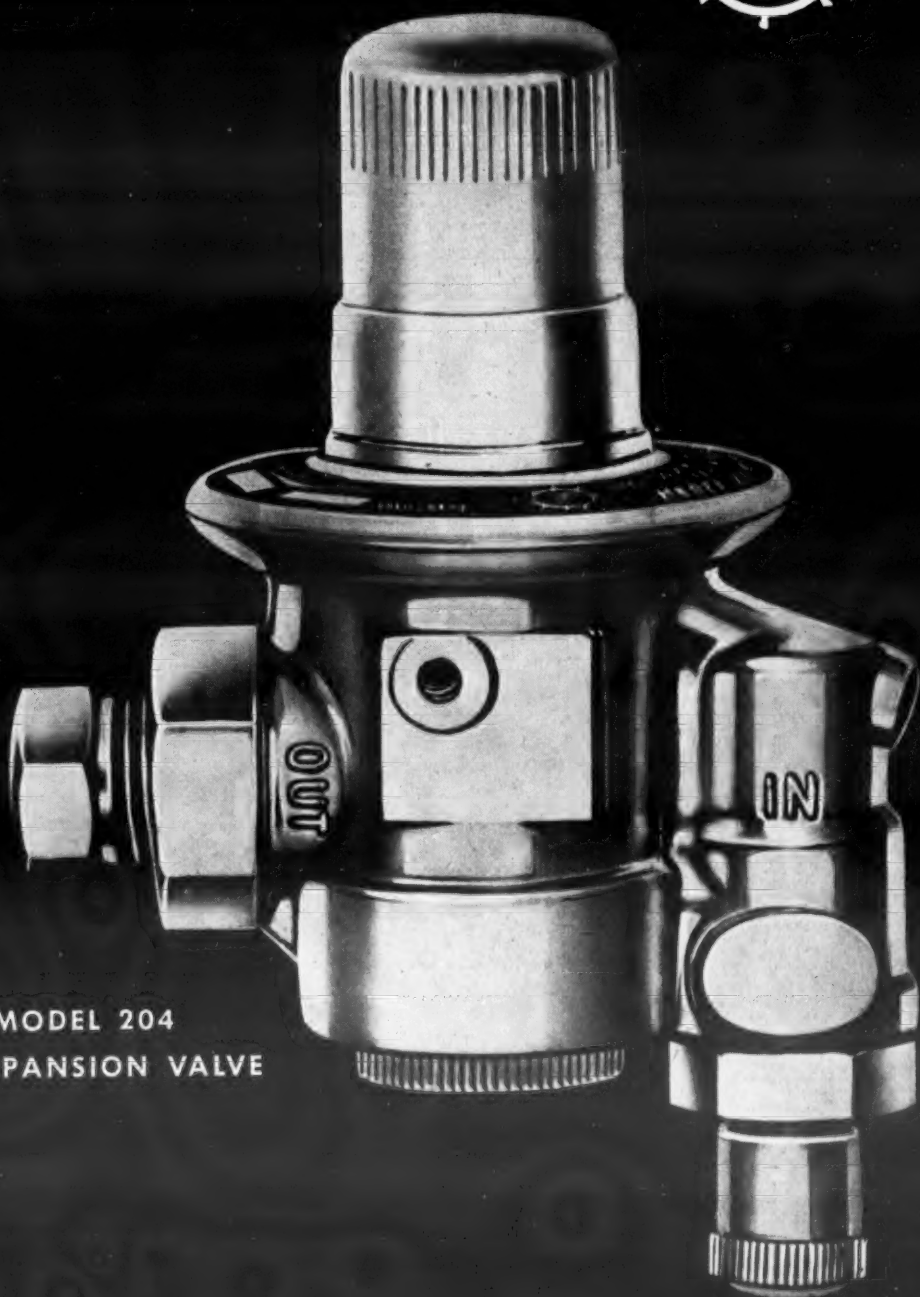
A native of Oakland, Calif., Mr. Matthews first became identified with the electrical industry in 1913 at San Francisco, where for 16 years he was in the electrical jobbing business. In 1929 he joined the Westinghouse Electric Supply Co., resigning the following year.

In February, 1943, he rejoined the supply company at Seattle.



Dependability doesn't happen...

IT'S **BUILT INTO** EVERY  VALVE



NEW  MODEL 204
AUTOMATIC EXPANSION VALVE



A new design of a famous and popular A-P Valve, the new A-P Model 204 AUTOMATIC Expansion Valve has many new features for improved operation on domestic refrigerators, beverage coolers, serum cabinets, and similar applications. One of these new features is the moisture-proof metal cap, providing absolutely tight seal against air and moisture for protection against freeze-up in the head, yet offering ready access to the adjusting knob.

Compact, small in size, precision-built throughout, sturdy,



sensitive and leakproof, Model 204 has an adjustable range of from 15" vacuum to 35 lbs. pressure. Rated at 1/4 ton Freon and 1/2 ton Methyl Chloride and Sulphur Dioxide, it is designed for long-life, dependable service. For further details, write for Bulletin No. 407A.

AUTOMATIC PRODUCTS COMPANY

2450 North Thirty-Second Street Milwaukee 10, Wisconsin
Export Department — 13 E. 40th St., New York 16, N. Y.

DEPENDABLE REFRIGERANT VALVES

STOCKED AND SOLD BY PROGRESSIVE REFRIGERATION JOBBERS EVERYWHERE —
RECOMMENDED AND INSTALLED BY LEADING REFRIGERATION SERVICE ENGINEERS

Filtrine
HIGH EFFICIENCY

LOW TEMPERATURE WATER COOLERS

For Bakeries, Bottlers and General Application

Capacities to 300 G. P. H. and storage to 150 gallons.

Water Cooled to 34 degrees.

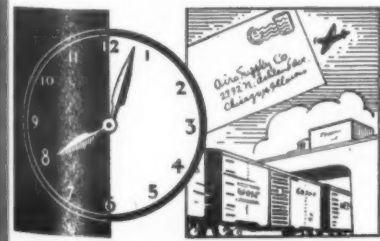
SAFE-DEPENDABLE-EFFICIENT SHIPMENT FROM STOCK

Write for Complete Catalog

FILTRINE MANUFACTURING CO.

53 Lexington Ave., Brooklyn 5, N. Y.

"Manufactured for Over 40 Years"



AROUND THE CLOCK SERVICE

While you sleep—while you are out on profitable service calls—while you take care of other important business matters—tools, equipment, and parts ordered from AIRO speed on their way to you. No valuable time wasted waiting for counter service when you buy by mail from AIRO, the middle west jobber geared up to give nationwide service "around the clock."

AIRO SUPPLY CO. (NOT INC.)

Dept. B WHOLESALE ONLY

2732 N. Ashland Avenue

Chicago 14, Illinois

N.E.W.A. Appliance Committees Probe Warranty Policies, Other Problems

(Concluded from Page 1)

that, through a survey of the American Bankers Association national membership of some 15,000 banks, 90% of the banks plan to handle consumer loans after the war. The banks have broadened considerably their old policy on credit financing. They are most anxious to cooperate in the servicing of all financial requirements. Their plans, when effective, should be a stimulant to the sale of electrical appliances.

BANKS IN FINANCING

The Federal Housing Administration program of including the value of all major appliances under their 20-year insured mortgage loans was discussed. The various state definitions, regulations, and the possibility of F.H.A. extending its policy to include replacement of worn out or obsolete appliances were discussed. It was decided to enlarge upon the study of the subject.

The Publicity, Sales Promotion, and Sales Training Committee meeting covered a major subject of sales training for wholesale and retail organizations, and both urban and rural areas were discussed at great length. A Sub-Committee was appointed to explore ways and means of developing and instituting a sales training program.

Publicity given by some manufacturers to possible new postwar appliances was discussed. It was the consensus of the Committee that the consuming public was being misled by "dream-type" advertising, and a recommendation was made that such advertising should be counteracted

because if the "dreamtype" of appliances are waited for by the consuming public, the postwar appliance market will be adversely affected. Active plans are now under way to carry out that recommendation.

Another subject discussed by the Committee was "tags"—information tags attached to all electrical appliances in order that the consuming public will have full knowledge concerning the appliances. It was determined that this type of tag would be a great aid to both the sales organization and the purchaser.

Other subjects, such as store arrangement and salesmen's compensation methods were briefly touched upon, but because there are separate committees in existence which will study these matters, they were referred back to the respective com-

mittees emphasizing the importance of each subject.

CHECK NEW STOCKING METHODS

The Warehousing, Deliveries, Installations, Freight Rates, and Claims Committee plans to have a meeting early in 1945. It will have, among many other subjects, one on handling and stock piling equipment. The war effort has developed many new ideas and several new devices to aid in handling merchandise in warehouses.

The Legislative Committee Chairman is busy with plans for an early meeting of his Committee. He is preparing, for the Committee's consideration, proposed legislation for local state's enactment. Among other suggestions being prepared in con-

nection with such proposed legislation is one to discourage unfair trade practices and particularly the practice of trade diversion.

R. C. Hill, director of the Appliance Division, has spent a considerable portion of his time holding meetings with members and prospective members to outline the above program and to advise all on the current activities of the division. He has visited Philadelphia, Albany, Syracuse, Buffalo, Columbus, Cleveland, Chicago, Milwaukee, Detroit, Grand Rapids, Washington, Richmond, Norfolk, Roanoke, Lynchburg, Charlotte, Harrisburg, and Boston. In January of 1945, he is holding meetings in Atlanta, Birmingham, New Orleans, Knoxville, and Louisville.

VETERAN'S REEMPLOYMENT

The entire electrical industry has been invited to cooperate on a Veteran's Reemployment Program. Details developed by the director have been submitted to the manufacturer, utility, and wholesaler branches of the industry. Approx-

mately 110 Electrical Leagues, Clubs or Associations at the local level have been supplied with the details of the plan. Syndicated window cards or counter cards and application blanks for prospective employees of the entire Electrical Industry have been prepared and offered on an actual cost of printing basis.

The plan stresses good public relations between industry and the consuming public. It emphasizes the competition which the Electrical Industry can expect from now on from other industries who will make vigorous efforts to attract the servicemen and women who have been technically trained by the armed forces. Briefly summarized it is in four steps:

1. Develop local industry cooperation.
2. Create interest of those seeking jobs by providing opportunities for experienced veterans to find jobs suited to their training.
3. Arrange equitable distribution throughout the electrical industry of applicants for employment.
4. Exchange personnel information and data among local activities.

28 million future
appliance customers invited to
"The G-E
House Party!"

Great, New Radio Show Goes on the
Air for G-E Retailers January 15th,
at 4 o'clock, E. W. T.



Art Linkletter, well-known Hollywood actor and producer, is the Master of Ceremonies for "The G-E House Party." You'll have to hear him to appreciate what a wonderful job he does of weaving the "sell" on appliances right into the show itself.

New! Different! Sure-fire for women listeners!

"The G-E House Party" is unique among radio shows today.

It's an "audience participation" program. It'll feature quizzes . . . games . . . contests . . . for both grownups and youngsters in the studio audience . . .

There'll be helpful service information for women listeners . . . answers to women's domestic and housekeeping problems . . . demonstrations of new appliances, new advances in electrical living . . .

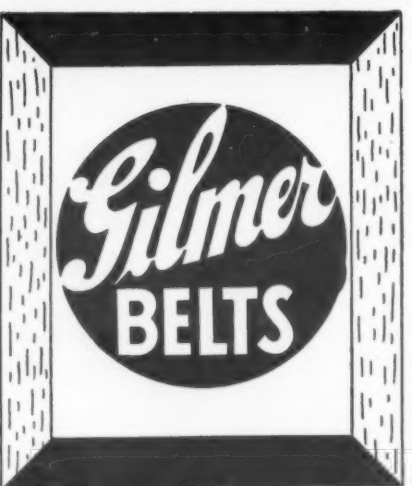
All made into one smooth-running, delightfully entertaining program that's a natural for getting women listeners . . . and a natural for building business for the complete line of G-E Appliances!

WAR INDUSTRIES NEED REFRIGERATION

The use of refrigeration in industry has been greatly accelerated by the war. In peacetime this expansion may logically be expected to continue. Write for literature.

GENERAL REFRIGERATION DIVISION

Yates
American
Machine Co.
Beloit, Wis.



Dealers who stock Gilmer Belts, for replacement on air conditioning and refrigeration units, do a profitable service business.

Gilmer Belts are rugged, long-lived, and efficient, built to do the best job possible for the user. Get hold of your Gilmer jobber today . . . be ready for more business.

L. H. GILMER COMPANY
Tacony, Philadelphia 35, Pa.
DIVISION OF UNITED STATES RUBBER COMPANY

San Antonio Dealer Assn. Increases Membership

SAN ANTONIO, Tex.—The Electric & Gas Appliance Association of San Antonio enjoyed a good year during 1944, despite the fact that production has been stopped on major appliances, W. C. Cowles, Cowles Sales Co., president, reported. Membership was increased, the present number being 40.

"All members went through the year in good shape," Mr. Cowles reported. "This is due to a large extent to the fact that practically all of them have other lines on which they can depend, and the few who do not, have been getting by on repair work. Meetings are held twice a month, and the attendance has been good."

Officers, in addition to Mr. Cowles, are: T. A. Beniteau, Broadway Auto Supply Co., vice president, and Walter Meyer, A. C. Toudouze Hardware Co., secretary-treasurer.

Restaurant Owners Tell 'What They Want First'

CHICAGO—Biggest demand among restaurant operators in 35 states and Canada is for improved and redesigned dishwashing machines, according to a survey conducted by the National Restaurant Association.

Ranges, coffee makers and urns, steam tables, and equipment controls are also needed, restaurant men say.

Several improvements in present equipment that manufacturers might make to aid the restaurateur were suggested in the survey, including the addition of mechanical levers to open and shut refrigerator and oven doors. Easy-to-clean kitchen equipment is also desired, the suggestion being made that ranges have a smooth-surfaced top and cool quickly to facilitate cleaning.

Quick-cooling coffee urns, steam tables with varying degrees of heat for each section, an electric eye to open room doors, and automatic timers for ovens are other wants.

Eureka Official Describes Confusion, 'Lost Allocation' In 'Spot' Program

NEW YORK CITY—Admitting to 150 distributors assembled at the Waldorf-Astoria hotel here recently that he and his company were "confused" as to their status on spot authorizations for vacuum cleaners and electric irons, George T. Stevens, vice president of Eureka Vacuum Cleaner Co., revealed that the company cannot now promise these civilian appliances before the second quarter.

Within the last two weeks, Mr. Stevens said, Eureka has received new war contracts which will increase its production of electric control motors for bombers and fighter planes, pyrotechnic signal devices, and other war materiel.

Just what the immediate future will mean to spot authorization production, Mr. Stevens said he does not know, but he revealed that the company is considering as "lost" its fourth quarter 1944 allocation of

5,000 vacuum cleaners, despite carry-over provisions in allocations.

Despite the delay of starting output of consumer goods, Mr. Stevens outlined Eureka's merchandising plans as part of the "planning necessary for the company to meet its postwar responsibility of employing as many as possible."

Postwar products of the company, distributors were told, include a "complete home-cleaning system," comprising tank-type and upright-type vacuum cleaners, with redesigned and restyled cleaning tools adaptable to both cleaners; a cordless electric iron; and an electric food disposal machine.

Prices of its products cannot be announced until the Office of Price Administration completes its study of component parts pricing, and many manufacturers, declared Mr. Stevens, have filed applications with OPA for higher prices.

Schwartz Is Buying Corp. Appliance Representative

NEW YORK CITY—Lee H. Schwartz, formerly with Montgomery Ward, L. Bamberger of Newark, N. J., and the Chicago Mail Order Co., has been named New York appliance market representative for the National Department Stores Management & Buying Corp.

Sherman Is Donaldson's Buyer of Appliances

MINNEAPOLIS—Eugene R. Sherman will join L. S. Donaldson Co. store here as buyer of electrical appliances and paints Feb. 1. At present he is assistant housewares buyer for Wieboldt Department Stores, Chicago.

Radio Show Rounds Out G-E Promotion Program

CINCINNATI—Sixty General Electric dealers and leading industrialists gathered together Jan. 15 as the guests of the local G.E. Appliance Distributing Branch to hear the premier of the new radio show, the "G-E House Party."

"We are now using all important mediums to tell our story," declared Branch Manager Paul C. Wilmore. "Readers of national magazines will get a peek at the postwar appliance future. We are keeping the public abreast with some of the more interesting developments of our all-out war effort in a schedule of key city newspaper advertisement. Now, with the addition of the "G-E House Party" to the "Hour of Charm" and "This World Today," we feel we are doing what we can do help our G.E. dealers build for the future."



"The G-E House Party" will be actually staged like this in a studio that holds 500 people. Notice that G-E Appliances are right in the stage setting. They're actually demonstrated as part of the "commercials," which are as lively and entertaining as the rest of the program.

It's your show! It sells for you!
Don't miss it!

Take 25 minutes of your time to tune in and listen to "The G-E House Party."

Find out what a terrific job it does in selling the complete electrical appliance idea . . . in building desire and preference for all the G-E Appliances you sell—from the smallest to the largest!

Ask your family to tune in, too! See if they don't agree that "The G-E House Party" is the kind of program they'd like to hear—not just once in a while—but every day! General Electric Company, Appliance and Merchandise Department, Bridgeport, Conn.

TUNE IN "The G-E House Party"

STARTING: January 15th

TIME: Every weekday, Mon. thru Fri., 4 to 4:25 p. m. E.W.T.

STATIONS: CBS NETWORK, 142 STATIONS. (See your paper for local station.)



GENERAL ELECTRIC

FOR VICTORY: BUY AND HOLD MORE WAR BONDS!

PURO ELECTRIC WATER COOLERS

BRANCHES IN PRINCIPAL CITIES
MAIN OFFICE
440 LAFAYETTE ST.
New York 3, N. Y.

PURO FILTER CORP. OF AMERICA

DRINKING WATER SPECIALISTS FOR 40 YEARS.

Designers and Manufacturers of:
Thermostatic Expansion Valves;
Pressure Regulating Valves;
Solenoid Valves; Float Valves

ALCO

VALVE COMPANY • ST. LOUIS, MO.

MASTERCRAFT
ADJUSTABLE REFRIGERATOR PAD

NATIONALLY ENDORSED

Pad is adjustable to all makes and sizes of refrigerator cabinets; thoroughly protects finish of cabinet from scratches and marks during moving; easily and quickly put on or off; sturdy, lasting construction; easily pays for itself in a short time. Price \$11.75 each.

Attractive lettering of your name on pad at \$2.00 each extra.

For carrying your refrigerator more safely and easily, use the Mastercraft Adjustable Carrying Harness which is a separate unit from the pad and priced at \$3.50 each.

Write for complete folder and prices on pads for refrigerators, washers, ironers, ranges, radios; also furniture pads and protective covers. . . . All prices subject to change without notice.

BEARSE MANUFACTURING CO.
Incorporated 1921
3815-3825 Corland St., Chicago 47, Ill. ois

REVERE Dryseal Copper Tube for REFRIGERATION

This tube is now readily available through distributors in all parts of the country for repair and service work.

Revere Dryseal Copper Tube is dead soft, and so it is exceptionally easy-working. Flares, bends, coils with ease. Its soft temper and fine, close, even grain structure are produced by precise, automatically-controlled electrical heat-treating, during which no air touches the tube, inside or out. The metal is oxygen-free to begin with, and the "kid glove" care we give it in every step of manufacture keeps it that way, bright, dry, oxide-free. After final dehydration each end is sealed tight to keep out dirt, air, moisture—and the sealed ends are no larger than the diameter of the tube, permitting easy installation in restricted spaces. Available in coils of approximately 50 feet, and in sizes from $\frac{1}{8}$ " to $\frac{1}{4}$ " o.d., wall .035".

Also important in refrigeration and air conditioning—Revere Sealed End Copper Tube, each length plugged and taped to keep tube chemically clean and protect the ends against distortion. Available in hard or soft tempers, in three types, for pressures up to 400 lbs., and in diameters from $\frac{1}{4}$ " to 12 inches. Write Revere Executive Offices for full information.

REVERE
COPPER AND BRASS INCORPORATED

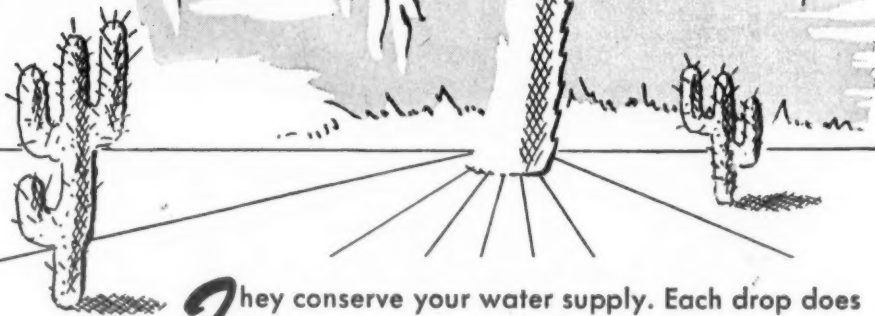
Founded by Paul Revere in 1801

Executive Offices: 230 Park Ave., New York 17, N. Y.



Where Water is Scarce...

INSTALL MARLO EVAPORATIVE CONDENSERS



They conserve your water supply. Each drop does 20 times as much work because it is used over and over again until it evaporates. It is not wasted down the sewer. That solves sewerage problems, too.

Our Condensers are built for any refrigerant, in sizes from 5 to 100 ton capacity. Their outstanding features assure long, low-cost operation:

- All Prime Surface Coils (after the war)
- Sturdy Corrosion-Proofed Sectional Construction
- Single-Motor "Unidrive" Pump and Fan
- Self-Aligning Bearings

May we send our descriptive bulletin?

MARLO EVAPORATIVE CONDENSERS

Ball-Bonded Blast Coils—Cooling and Heating • Air Conditioning and Refrigeration Apparatus • Industrial Blower Units • Unit Coolers • Evaporative Condensers and Coolers • Low Temperature Apparatus.



"MARLO MEANS HEAT
TRANSFER EQUIPMENT"

MARLO COIL COMPANY

ST. LOUIS 10, MISSOURI

Designing a Finned Coil In Terms Of Being a 'Power Absorption Package'

'Rule of Thumb' Easiest But Not Always Best Method

DETROIT — New ways of approaching the design of finned refrigeration coils in order to assure coil design of top efficiency were outlined by B. B. Schuett of Long Mfg. Division of Borg-Warner Corp. in a discussion before the January meeting of the Detroit A.S.R.E. Section.

"We have all used finned coils so much and have been willing to accept for so long the rules of thumb to apply them to a job that we drift into a coma of acceptance that denies an understanding of what makes them tick," Mr. Schuett began.

"Finned coils were developed from the bare tube coil because the inventor, by chance or analysis, observed a substantial increase in capacity when fins or other form of extended surface was added to the tube. For a long time fins or tubes were handled in a very haphazard manner, but in the past 10 or 15 years a very respectable idea of the proper application of finned coils has been used. Fortunately, we have learned steadily from these earlier applications, and coils today are, on the whole, applied in a better and more economical manner than ever before.

Discarding 'Rule of Thumb'

"In taking a new viewpoint other than rule of thumb, I have found a big advantage in approaching a coil design as a 'power absorption package,'" Mr. Schuett stated.

"The input and output must be reasonably close together and the cost of the output, the cost of the space and weight of the equipment should offer some economic advantage.

"Design of this power package coil requires some finesse, but only a little more than the problem of rolling a table.

"A table can be moved, with blunt legs on the floor, with one manpower, but with casters it moves to the touch. That's like putting fins on tubes—a big load moves easier—but the size of the caster is the trick, and the kind of lubricant, the kind of material, and how many. A caster job can be tough when it becomes necessary to design to maximum capacity, minimum weight, and minimum cost. The design of the

power package coil works in just about the same way.

"We take the available power input; the requirements in output; and watch these two against the space, weight, and cost allowed.

"So the designer can go about his new problem something like this:

The 'Power Potentials'

"One of the power potentials of a coil is the temperature difference across the coil—the entering air temperature is the high side and the outlet refrigerant is the low side. The temperature difference must be used to transfer the heat against the resistance of the inside refrigerant film, the tube wall, and the outside air film.

"Another power potential is the fan power. Limitations are also established here, but the control is usually accomplished with less difficulty.

"The third power potential is the refrigerant pressure, and this is one that is coupled closely to the coil temperature difference because the lower the pressure drop through the coil, the more closely the average coil temperature approaches the outlet coil temperature and permits full use of the entire available refrigerating effect over a greater portion of the coil. The compressor may also operate at a higher suction pressure and lower head pressure.

"The coil is absorbing all three of these potentials in handling the heat transfer job. Each one costs money in space, weight, and operating expense of both the coil and the other parts of the refrigerating system."

Elements of Resistance

The tube of the coil in serving as the refrigerant conduit, explained Mr. Schuett, has three resistance elements opposing the heat potential or temperature difference of the coil—first, the inside refrigerant film; second, the tube wall; and, third, the outside air film.

In a bare tube with 500 f.p.m. air velocity and "Freon" as a refrigerant we can have an inside resistance of .005 and an outside resistance of .100. The resistance of the tube wall is usually so low that

(Concluded on Page 17, Column 1)



A GOOD UMBRELLA MAY KEEP YOU DRY, but...

... wouldn't a refrigeration engineer look foolish holding one over a cooling unit!

However, he has known for years that TZ was specially designed to keep a refrigeration system dry. And he, and thousands of others, used more of this liquid dehydrant in 1944 than ever before. But that's an old story, for TZ has been breaking sales records each year right from the beginning.

Destroys Moisture Chemically and Neutralizes Acid

THAWZONE

Fuller's Patent
The PIONEER FLUID DEHYDRANT

**HIGHSIDE
CHEMICALS CO.**

195 Verona Ave.
NEWARK 4, N. J.

New Concept of Factors in Design Of Finned Coil Told by Schuett

(Continued from Page 16, Column 5)

It is negligible. The outside resistance then is 20 times as great as the inside—so to transfer a given quantity of heat through one square foot of tube surface with a given temperature difference means that the outside air film will take 20 times as much temperature difference as the inside film, or 95% of the available heat potential is used to move the heat through the air film alone. Such surface is out of balance.

Each one of the resistances in the heat path is defined by the quantity h , degrees F.; sq. ft./B.t.u. This quantity is, of course, the reciprocal of conductance B.t.u./hr.; degrees F.; sq. ft.

Importance of Area

"We cannot change the resistance of this air film except by changing the air velocity," said Mr. Schuett, "so, with the air velocity fixed, the temperature difference fixed, the heat flow fixed, we have only one move, and that is to change the area. If the heat can't get through the outside film of a bare tube because it is small, we have only to make it large.

"Fins then make it possible for a quantity of heat to pass through a resistance with less temperature difference by giving the heat a greater area for the passage. We are then saving heat potential and the new temperature difference required to move the heat through the outside film approaches that difference required to move the heat through the inside film. Each resistance then uses approximately 50% of the total available. That is what is called balanced surface.

"Such a condition of operation is not usually attained, but we can operate in ordinary circumstances with the inside resistance taking 40% and the outside resistance 60% of the total temperature difference.

"So far we have used fins as a means of effectively distributing the heat potential of the coil surfaces. Doing so has permitted us to either

reduce the total temperature difference for a given heat load, or to increase the heat load for a given temperature difference. If either one of these accomplishments were tried with a bare tube, it would be necessary to use five to 10 times the original length of tubing.

"In a finned coil, then, the refrigerant does not have to travel as far—its pressure drop is less—and again we are saving another of the potentials that a coil absorbs—the refrigerant pressure potential. The lower pressure drop not only keeps the coil at its optimum operation, but every pound/sq. in. saved represents a saving in space and weight of compressor.

"The third potential which is absorbed in coil operation is the fan power, and here again fins in an air stream will absorb less power per sq. ft. of area through a tube with the same surface.

"If a finned coil looks like the right kind of surface for your application, then an evaluation of the thermal resistances will be a distinct advantage to the designer so that he will use enough fins and tubes to keep operation losses of the whole system down to a minimum, without adding too much to the cost and weight of the unit."

A Practical Example

When all of the factors are considered in good proportions, Mr. Schuett explained, it will be possible to make gains like this:

A $\frac{1}{2}$ O.D. coil with eight fins per inch occupying 3.7 cu. ft. was changed to a $\frac{3}{4}$ O.D. coil with $10\frac{1}{2}$ fins per inch occupying 1.85 cu. ft. or one half the space required for the first coil. Both units were applied to the same job, but the smaller tube permitted a lower external thermal resistance and the ratio of internal and external resistances permitted a higher surface ratio.

"This is an example in which analysis of the problem showed a distinct gain over the rule of thumb," the speaker concluded.

Operating Costs of Reverse Cycle Job Compare Favorably

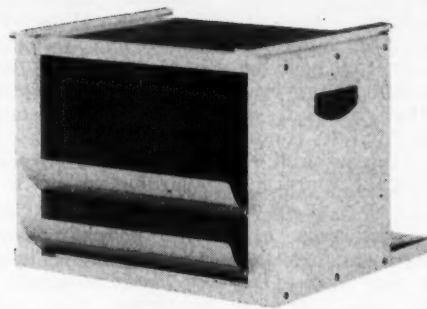
LEHIGH, Pa.—Cost of operating a heat pump air conditioning system (reverse cycle refrigerating unit) compares well with conventional methods of home heating, declared G. K. Marshall, air conditioning engineer with General Electric Co., Bloomfield, N. J., in a talk before the Lehigh Valley Section, American Institute of Electrical Engineers.

"Using power at 1 cent per kilowatt hour, the heat pump would have the same operating cost as coal at \$14 a ton, oil at 10 cents a gallon, manufactured gas at 40 cents per 1,000 cu. ft., or natural gas at 80 cents per 1,000 cu. ft.," declared Mr. Marshall.

"This is approximately the picture as it exists today with a heat pump constructed with general purpose refrigeration equipment in a climate such as Pittsburgh and drawing its evaporator heat from the outdoor air. But it can be improved by further development of the equipment or by finding a higher temperature source of heat than outdoor air," he said.

Although commercial development of heat pumps is still in the idea stage, Mr. Marshall averred, "to predict that in the next 10 years a substantial proportion of our homes will not be heated by such units seems rash in view of the rapid developments we have already seen in other types of equipment for the home."

FILTERPURE UNIT COOLERS



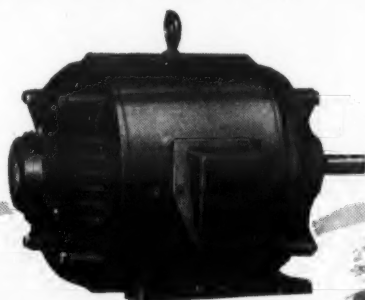
Post-war models with copper and aluminum coils are now in production.

Many new engineering improvements plus tops in performance and eye appeal make them the outstanding unit cooler on the market today.

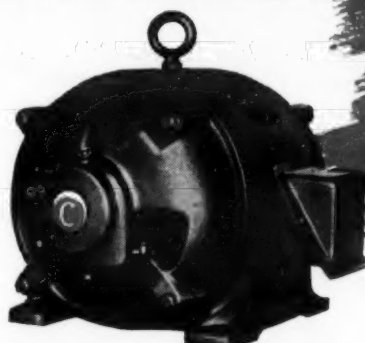
Write or wire for complete information.

BETZ CORPORATION
Hammond, Indiana

You Increase Customer Good-Will When You



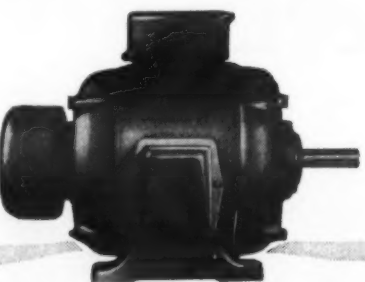
Type RS Repulsion Start Induction Brush Lifting Single Phase Motor. Built in sizes 1/3 to 20 Horsepower.



Type SC Squirrel Cage Induction Three Phase Motor. Built in sizes 1/6 to 600 Horsepower.



Type DN Direct Current Motor. Built in sizes 1/20 to 300 Horsepower.



Type CSH Capacitor Start Induction Motor. Built in sizes 1/20 to 20 Horsepower.

Select Quiet
CENTURY MOTORS
for
Air-Conditioning!

There's a complete line of Century motors to meet every air conditioning application. There are many good reasons why Century motors are widely used throughout the air conditioning industry. Here are a few of them: close tolerances on all moving parts, freedom from electrical and mechanical vibration, unique bearing bumpers that reduce chatter from V-belt irregularities.

Century offers motors for these air conditioning applications—refrigeration compressors, unit heaters, blowers, pumps, stokers.

These are the types from which you may choose:

Single Phase	Open	Cushion Mounting
Polyphase	Totally Enclosed	Rigid Mounting
Direct Current	Dust Proof	
	Drip Proof	
Vertical	Splash Proof	Ball Bearing
Horizontal	Explosion Proof	Sleeve Bearing

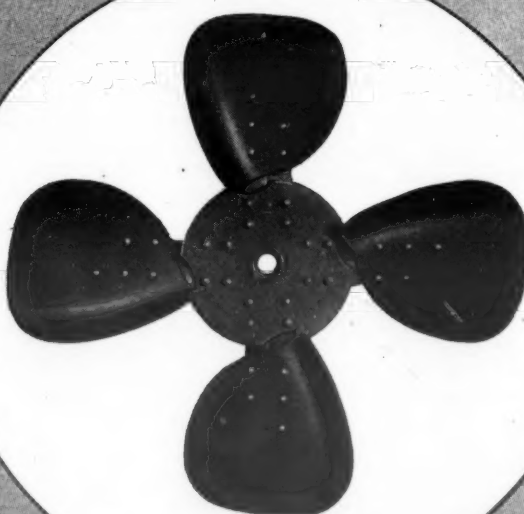
Find out today how the smooth operation, protective insulation, rigid construction, and many other features work together to give your customers more satisfaction through more comfortable air conditioning. Call in a Century engineer.



CENTURY ELECTRIC COMPANY, 1806 Pine Street, St. Louis 3, Missouri

Offices and Stock Points in Principal Cities

412



A NEW ATTIC FAN

For the first time, a completely new line of fans for attic ventilation has been developed on aerodynamic principles. The fans of the "B" series line are available with 3, 4 or 5 blades in the standard diameters of 24, 30, 36, 42 and 48 inches. Geometric proportions remain the same throughout the entire line.

Constructed of steel, extra strength has been added in the form of heavier spider arms and a larger center disc. A redesigned blade shape insures maximum air delivery and improves appearance.

To specify the proper fan or blower wheel quickly and accurately, write us for an Air Impeller Specification Sheet. When completely filled out, this sheet contains all the necessary data for recommending the proper air impeller.

AIR

IMPELLERS
for every purpose

THE TORRINGTON
MANUFACTURING COMPANY, TORRINGTON, CONN.

Air Conditioning Among Leading Items Programmed In Churches' Plans To Improve Their Buildings

New and Existing Structures Will Consider It, Survey Discloses; Washington Church Has Set Aside \$50,000 For Job

CHICAGO—Sharing in the present war-accelerated prosperity, American churches have accumulated hundreds of millions of dollars for postwar construction and building improvements, a considerable amount of which is earmarked for air conditioning installations, states the *Wall Street Journal*, following a recent survey.

Air conditioning installations are scheduled for both new and existing church structures, it was said. One church, for example, St. Patrick's Roman Catholic Church in Washington, D. C., has already set aside \$50,000 in its treasury for postwar installation of air conditioning equipment.

Installers of air conditioning will be competing with other lines in the

postwar church expansion program, however. Considerable sums will undoubtedly be spent for pipe organs, none of which have been produced for civilians during the war years, stained glass windows, and carillons, according to the report. Parochial schools will be constructed and also additions made to church-supported colleges and hospitals.

Methodists, comprising the largest Protestant denomination in the country, plan to spend \$500 million postwar for new structures and remodeling of old ones. Proportionately large expenditures are planned by other denominations, including the Roman Catholic, Congregational and Christian, Jewish, Church of Jesus Christ of Latter Day Saints (Mormon), Episcopal, and Baptist.

Radtko President of Cincinnati Group

CINCINNATI—Arthur Radtko is the president of the Cincinnati Refrigeration & Air Conditioning Association for 1945. Other officers are John Rash, vice president, and L. J. Quinn, treasurer.

The officers and Norbert Rau comprise the board.

August Bachman was renamed executive secretary.

Refrigeration Service Co. Formed In Long Beach

LONG BEACH, Calif.—Refrigeration Service Co. is the firm name under which Frederick A. Tremble, John L. Shoemaker, Carl Bliss, and Earl B. Gunsauls have published a certificate that they are conducting business at 864 East Sixth St., Long Beach.

With Red Cross Abroad



The American Red Cross has announced that W. Henry Knowlton has arrived in the Pacific theater of war to serve the armed forces as a Red Cross assistant field director. Mr. Knowlton left his position as sales promotion manager of Airtemp to join the Red Cross. At one time he was a member of the staff of *Air Conditioning & Refrigeration News*.

Hotel Edison In N.Y. Is Restricted For Installing Cooling

NEW YORK CITY—The Compliance Division of the War Production Board on Jan. 6. issued Consent Order C-242, barring the Hotel Edison, 229 West 47th St., New York City, from making any alterations or engaging in construction work over \$100, until 1946, this penalty being ordered because the hotel violated WPB regulations when it installed an \$18,000 air conditioning system.

Hotel Edison will be permitted to maintain and repair its structure and premises, but no blanket authorization or permission will be given for miscellaneous constructions until after Dec. 31, 1945, compliance officials emphasized.

WPB charged the Hotel Edison Corp. of New York City, with purchase and installation of an air conditioning system about February, 1943, at an approximate cost of \$18,000. This action violated WPB Conservation Order L-41, which prohibits installation of extensive air conditioning systems that would divert critical labor and materials. Specific authorization and approval must be obtained for beginning such construction work, WPB officials explained.

Perfex Employees To Share Profits

MILWAUKEE—Julius K. Luthi, president of Perfex Corp. here, has announced that the directors of Perfex have approved a profit sharing plan, designed to provide its employees with retirement benefits at the age of 65. All benefits are in addition to those provided by the Federal Social Security program.

The plan requires no contributions from any employee. Each year Perfex will contribute 20% of its profits after allowance for a predetermined return on the company's net worth. The corporation's estimated contribution for this year will amount to \$80,000.

Every regular, full time employee who has completed four years in the continuous employ of the corporation and who has attained the age of 30 will participate in the plan. Each year's contribution by the company will be allocated individually to each eligible participating employee in accordance with a uniform formula based upon the employee's earnings for the year and the number of years in the employ of the company.

The total amount allocated to each employee during the entire period of his or her participation will be paid to the employee on a predetermined retirement basis. Participants who leave Perfex prior to retirement will receive, according to a formula, a portion or all of the amounts allocated to them. The plan also provides total disability and death benefits for each participating employee.

The funds will be invested in securities, life insurance, and annuity policies. The plan will be administered by Marine National Exchange Bank of Milwaukee, as trustee, and a committee of three members appointed by the board of directors of Perfex.

New Frozen Food Plant Planned In California

MODESTO, Calif.—Plans are being prepared for construction of an addition to the quick-frozen foods plant of the California Frozen Foods Co., Modesto, Calif. The reinforced concrete structure will cost \$20,000.

Exports To Turkey On New Basis

WASHINGTON, D. C.—The Foreign Economic Administration has notified exporters that proposed exportations to Turkey through commercial channels will no longer require consideration by the British-American Coordinating Committee in Turkey, except for certain items.

These items are listed in Current Export Bulletin 217, mailed to exporters recently. As the situation changes, revisions of this list will be published in subsequent Current Export Bulletins. Exporters are advised that the publishing of this information should not be construed as indicating that commodities not on this list are in plentiful supply and will be licensed freely.

The revised procedure for filing applications for an export license to Turkey is as follows:

1. Export license applications for commodities not listed may be filed by the exporter upon receipt of the importer's order.

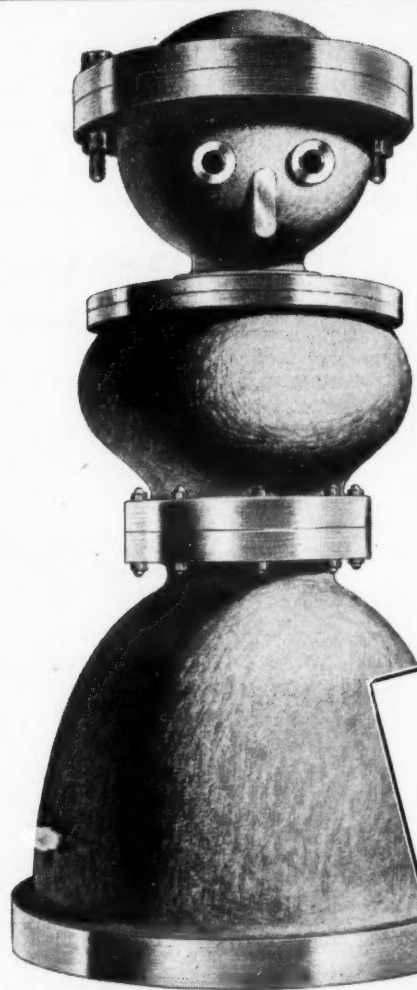
2. Export license applications for commodities listed in the export bulletin should not be submitted by the exporter prior to notification to the exporter by the Turkish Division, Foreign Economic Administration, that the proposed shipment has been recommended by the British-American Coordinating Committee in Turkey. Orders for these commodities must continue to be examined by that committee.

3. To export commodities to Turkey under the conditions described in either paragraph 1 or 2 above, export license application Form FEA 419 will continue to be submitted in quadruplicate to the Requirements and Supply Branch, Foreign Economic Administration, Washington 25, D. C., with a statement of the calendar quarter year in which the export is expected to be made.

Harold Lauer, Coast Engineer, Is Dead

LOS ANGELES—Harold B. Lauer, age 51, vice president of English & Lauer, Inc., air conditioning engineering firm here, died immediately after his automobile collided with a streetcar here recently. Investigators suspected that he succumbed to a heart attack.

A partner of Harold English, Mr. Lauer had long been active in the air conditioning field.



TO G-E DISTRIBUTORS AND CONTRACTORS

In Time, Newsweek, Business Week and a group of industrial publications, key executives in many industries are seeing this eye-catching advertisement. It's another in the G-E series describing unusual applications of Air Conditioning and Refrigeration, designed to help open new sales markets . . . new sales opportunities for you.

Going out with the Army . . . at her age?

It used to be months before a casting outgrew its brittleness and was mature enough to go anywhere. Naturally, that was costly, keeping "green" castings around for necessary seasoning out-of-doors.

Now, castings are seasoned to meet even the unusual requirements of war production in a few hours' time—by industrial refrigeration.

This is just one of many interesting ways in which Refrigeration and Air Conditioning are serving American industry-at-war.

General Electric engineers, in order to meet war-time conditions, have vastly improved industrial refrigeration and air conditioning equipment. Today, it is more compact, more flexible, more efficient.

When the war is over, these improvements will be reflected in a host of better things for peacetime living . . . better, and costing less, thanks to General Electric.

★ BUY . . . and hold . . . WAR BONDS ★

General Electric Co., Air Conditioning and Commercial Refrigeration Division, Section 451, Bloomfield, N. J.

Air Conditioning by
GENERAL ELECTRIC

Hear the General Electric Radio Programs: The "G-E ALL-GIRL ORCHESTRA," Sundays, 10 p.m., EWT, NBC; "THE WORLD TODAY" News, Every Weekday, 6:45 p.m., EWT, CBS

HOWELL MOTORS

ELECTRIC MOTORS FOR INDUSTRY SINCE 1915

HOWELL ELECTRIC MOTORS COMPANY · HOWELL, MICH. · REPRESENTATIVES IN ALL PRINCIPAL CITIES

Coast Shipyard Workers Go To School



This picture was taken at the opening of a refrigeration course sponsored by a Steamfitter & Helper Union in San Francisco, purpose of which is to teach shipyard workers a trade to which they may shift after the war. At far left, partly cut off in the picture, is John Schlemmer, engineer for a San Francisco air conditioning firm, who is teaching the course.

Union Starts Refrigeration Course 'To Prepare Workers For Postwar'

SAN FRANCISCO—More than 100 members of Steamfitters & Helpers Local 590 (AFL union), most of them shipyard workers, have started to study refrigeration in a course launched by the union.

A union publication says that the launching of this class in refrigeration "sparks a movement among AFL unions to prepare war workers for postwar jobs."

Teaching the course is John M. Schlemmer of General Air Conditioning & Heating Co. of San Francisco, formerly connected with

California Refrigerator Co. here and Rex Refrigeration Co. in Chicago.

The union members taking the course will go to school one night a week. Program for the course of study includes theory of refrigeration, type of refrigeration systems, installation of refrigeration systems, and maintenance and service of refrigeration systems.

One interesting part of the announcement about the course in the union publication was that which said that "members attending the sessions may obtain extra gas rations."

Birdseye Distributor In Arizona Will Build Warehouse

PHOENIX, Ariz.—Mission Foods, Inc., 805 Luhrs Tower, has purchased the Birdseye distributing franchise for the state of Arizona from James Minotto and D. V. Welch, both of whom are officers of Mission Foods. To house this Birdseye operation, Mission Foods will put up a large new building here, at a cost estimated at between \$150,000 and \$200,000.

"The frozen foods business has increased so much we felt we could not do justice to all three businesses," declared President Minotto of Mission Foods. "We are putting the money into an enterprise we think has the greatest possibilities."

Henry Valve Names New Representative



Following his recent appointment as factory representative for the Henry Valve Co., Hugo C. Smith (center) is shown at the factory getting some pointers on a few of the Henry products from George Wilson, jobber sales division, while Norbert Ott, manufacturers sales division, looks on ready to add his comments. Mr. Smith has opened offices at 1820 NBC Building, Cleveland, and will travel Ohio, western Pennsylvania, West Virginia, and Covington, Ky.

Investigate
SHERER

... decide Now on your source for
Refrigerator EQUIPMENT

WRITE
SHERER-GILLET CO.
MARSHALL, MICHIGAN

Knowledge of Native Dialect Is Essential In Servicing Operations In Hawaii

HAWAIIAN ISLANDS—(Special)—When Joe Rubenson of American Factors, Inc., first came to these beautiful islands some 15 years ago, at that time as a representative of Servel, Inc., he was confronted with the problem of learning the local jargon, as well as refrigeration practices peculiar to this locality. On his first trip to outlying dealerships on the Islands he was introduced by the local refrigeration distributor as "Engineer from ice box factory—this man ice machine make—he too much savvy—make to go—chop chop."

Undaunted by this expressive language, known throughout the Pacific as "pidgin English," which he now speaks with considerable fluency, Joe went about his business of selling refrigeration equipment to the conglomerate population of the Islands. It was the next year, 1930, that he answered a "wicki wicki" (hurry up) call for service from a frantic Mr. Isl who was the proud owner of a small confectionery store at Wapahoo.

It was in later years, however, when sealed electric units and gas refrigerators began to replace the

"old clunkers" which were in service on the Islands, that Joe began having trouble convincing the natives that the new quiet units were actually in operation.

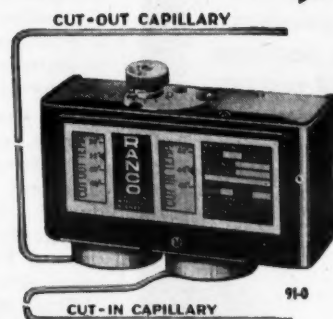
To this day Joe still has to converse in the dialect when he makes calls on the outer islands.

At the present time the refrigeration department of American Factors, Ltd., is handling Brunner commercial compressors, McCray refrigerators, Bush and Marlo coils, Sporlan valves, Penn and White-Rodgers controls, Wolverine and Chase Brass tubing, and Clarage fans. This equipment is marketed both at retail and to other dealers on a supply jobber basis. All refrigeration equipment comes under the firm's hardware department, of which L. C. Austin is manager.

Ask your Ranco Jobber

INTERLOCKING TWO-TEMPERATURE CONTROL

Type 91-0, for walk-in coolers, display cases, florists' boxes, etc. Assures uniform fixed temperature, uniform high relative humidity, completely automatic defrosting of the coil.



MAKE A HABIT OF WORKING
WITH YOUR RANCO JOBBER

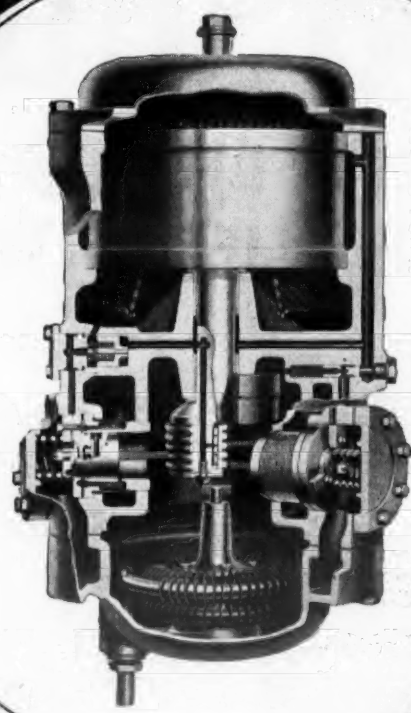
for Replacement Refrigeration Controls

In these days of shortages, substitutes and adaptations, it is a wise policy to make it a habit to work with your Ranco jobber. You will find that he can help you a lot by recommending the proper domestic or commercial control to perfectly perform the job you want done.

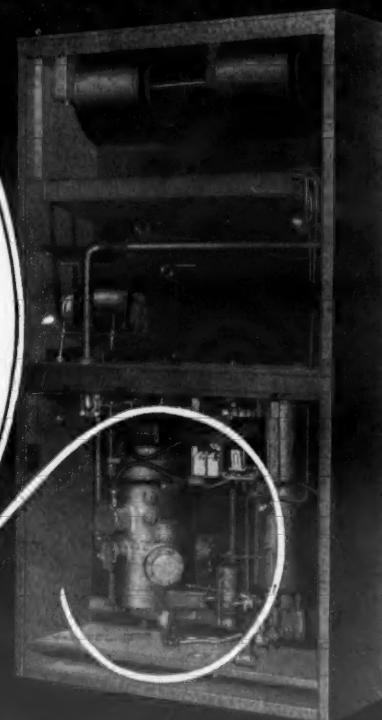
You will be proud and confident when you install Ranco Controls. They are beautiful instruments—dependable and accurate—precision made for long satisfying service.

Ranco Inc.
COLUMBUS 1, OHIO

CHRYSLER AIRTEMP



"PACKAGED" AIR CONDITIONING



WITH THE HERMETICALLY SEALED RADIAL COMPRESSOR

Air, Dirt and Moisture Sealed Out Means Years of Trouble-Free Service

Chrysler Airtemp "Packaged" air conditioning, with the compressor entirely encased in steel, is time-tested and proven in thousands of pre-war applications. Oil and refrigerant are sealed in—air, dirt and moisture are sealed out. Pressure lubrication of all moving parts assures continuous, dependable, quiet operation. All vital moving parts are Superfinished for long life.

Chrysler Airtemp originated and pioneered the radial compressor which is practically vibrationless

and operates at lower cost. Singly or in multiple, the 3HP and 5HP "Packaged" air conditioners are remarkably flexible in application, light in weight, and easy to install.

When you have a temperature-humidity control problem turn to products of Chrysler Airtemp. You will find there is a unit and capacity range to meet practically every air conditioning or commercial and industrial refrigeration requirement. • Airtemp Division of Chrysler Corporation, Dayton 1, Ohio.

Buy More War Bonds! Tune in Major Bowes every Thursday, CBS, 9 p. m., E. W. T.

HEATING • COOLING • REFRIGERATION

Your refrigeration parts and supply
house in Central New York and
Northern Pennsylvania

TED GLOU CENTRAL SERVICE SUPPLY CO.

516-18-20 Erie Blvd. E., Syracuse, N. Y.
209 Jefferson Ave., Scranton, Pa.

Phone 5-4000
Phone 3-4000

AT YOUR SERVICE

Acme products are backed by more than 26 years experience in building refrigeration and air conditioning equipment. Our engineering staff is at your service. Offices in principal cities. See your phone book... or write.

Acme equipment is delivering satisfactory performance in thousands of installations.



FREON CONDENSERS
OIL SEPARATORS
LIQUID RECEIVERS
HEAT EXCHANGERS
AMMONIA CONDENSERS
DRY-EX WATER COOLERS
HI-PEAK WATER COOLERS
FLOODED WATER COOLERS
EVAPORATIVE CONDENSERS
FORCED CONVECTION UNITS
PIPE COILS

Write for catalog on any item.

ACME INDUSTRIES
JACKSON-MICHIGAN

Factors In Design of Air Cooled and Water Cooled Condensers

A.S.R.E. Group Gets Data on Capacity Determination

DETROIT—Factors in the design of refrigeration condensers were outlined in a highly comprehensive manner by Dan J. Mull, McCord Corp. engineer, in a talk before the January meeting of the Detroit Section of A.S.R.E.

A refrigeration condenser, as Mr. Mull defined it, is a heat transfer unit in a refrigerator or a refrigeration system, used as the means of expelling to the atmosphere the heat pumped from the space to be cooled, the heat equivalent of the work done by the pump, and frictional losses of the system.

More specifically, he continued, a refrigeration condenser converts the discharge gas from the compressor to a liquid, so that a continuous supply of liquid refrigerant is available for expansion in the evaporator.

The heat expelled by the condenser from a refrigeration system is calculated from the total heat of the refrigerant vapor entering the condenser, minus the total heat of the refrigerant liquid leaving the condenser, times the pounds of refrigerant flowing.

The ratio of the heat expelled by the condenser to the heat absorbed by the evaporator varies with the conditions of operation, but for normal conditions (with "Freon-12" refrigerant), the ratio ranges from about 1.15 for air conditioning application to 1.45 for low temperature

application.

Thus, for a ton of refrigeration (200 B.t.u. per min.) at low temperature the condenser must expel approximately 290 B.t.u. per min.

Mr. Mull stated that refrigeration condensers may be classified in accordance with their application into two distinct groups: domestic and commercial.

Under the domestic classification are two types: air cooled forced convection and air cooled natural convection. Under the commercial classification are three types: air cooled forced convection, water cooled, and evaporative.

How They Are Constructed

"Air cooled condensers of either classification are generally made of all steel fin and tube construction, although other combinations, such as all copper, steel fin and copper tube, aluminum fin and copper tube, and all aluminum have been used," the speaker said.

"Cost factors up to the present, at least, have favored the all steel construction. Condensers of steel or copper construction are usually dipped in a solder bath to obtain a metallic bond of fin and tube, and for protection against corrosion. Solder coating the tubing alone and baking after fins are assembled is another method of obtaining the metallic bond, which eliminates the solder coating on the fins.

"When fins are made of steel or aluminum and tubes of copper, a strong mechanical bond can be obtained by expanding the tubes after the fins are assembled, thus eliminating the solder dip entirely. The expansion is accomplished either by hydraulic pressure or by forcing an oversized steel ball or bullet through the inside of the tubes.

"For appearance and corrosion resistance, the outside surfaces of condensers are generally painted, either by spraying or dipping. The painting seems to have little or no effect on the heat transfer for the forced convection type, but a dull black paint on a natural draft condenser does aid the radiation effect, increasing the overall heat transfer.

Conform to General Style

"From a general structural standpoint, air cooled condensers of various manufacturers do not vary to any great extent. For forced convection units $\frac{3}{4}$ inch O.D. tubing is used quite extensively. Tube centers range from $\frac{7}{8}$ inch to $1\frac{1}{2}$ inches, with 1 inch being the most popular.

"The tubes in multiple row units are either in line or staggered symmetrically. Multiple row units are

either single pass with crossover tubes from row to row, or are manifolded for as many passes as there are rows deep.

"Fins generally ranging from .006 to .010 inch for copper, .010 to .016 inch for steel, and .012 to .018 inch for aluminum, are placed from five to eight per inch and range from $\frac{1}{8}$ inch to $1\frac{1}{2}$ inch in depth per row.

"The fins of either individual or continuous construction are forced on to the tubes or the tube forced into the fins. A nest is generally used in the latter case to hold the spacing.

"Self-spacing fins for either of the above types have been developed. Spiral fin surface consisting of a flat strip of fin stock wound vertically and spirally around a tube, is used for forced convection air cooled condensers, but to a greater extent in water cooled condenser application.

Air-Cooled Type Limited

"Total surface requirements depending upon the operating conditions generally range from about 135 to 160 sq. ft. per ton of refrigeration at an average air velocity of 500 ft./min. Because of this requirement, forced convection air cooled condensers are limited to about 3 hp. capacity."

There are two types of natural convection air cooled condensers: the fin and tube type and the plate type, explained Mr. Mull.

Tube sizes for the former range from $\frac{1}{4}$ inch to $\frac{3}{4}$ inch in O.D. and tube centers from $\frac{7}{8}$ inch to $1\frac{1}{2}$ inch. The depth of this type condenser is generally limited to a single row with fins ranging from 1 to $1\frac{1}{2}$ inch deep.

Since the flow of air over the surface is dependent upon the induced draft created by the difference in temperature of the surface and the ambient air, the resistance to airflow of the surface is a decided factor in the proper functioning of the condenser.

Other specifications and methods of manufacture for the forced convection type apply to this type also; with the possible exceptions that the maximum fin spacing is six per inch and spiral fin surface is not used.

Plate type static condensers are made of two sheets of steel seam or spot welded together with grooves or corrugations in one or both of the plates forming a refrigerant circuit. The path of the refrigerant is either a single pass or a multiple of passes, with headers at top and bottom formed between the plates.

Natural convection air cooled condensers are quite limited as to capacity, the maximum being about $\frac{1}{2}$ hp. Their greatest use, therefore, has been for household refrigerator application.

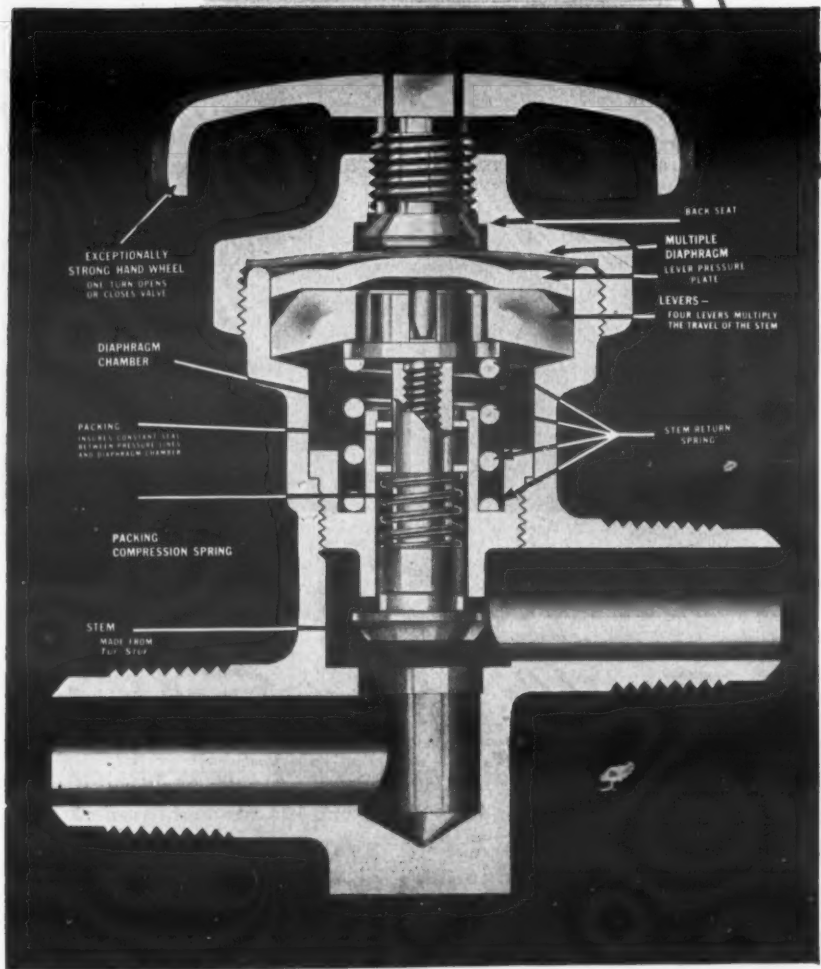
Water Cooled Types

Water cooled condensers can be classified into three types: double tube, shell and tube, and shell and coil.

(Concluded on Page 21, Column 1)

Increased...

DIAPHRAGM LIFE PROLONGS THE SERVICE LIFE OF THE VALVE



Because of the small amount of movement, the multiple diaphragm in our TRIPL-SEAL Valve is never deflected past its normal center; thus immeasurably prolonging both its life and the life of the valve in service.

The multiple diaphragm has approximately 20% increased surface area over more conventional types of diaphragms. A single turn only is necessary to open or close the TRIPL-SEAL Valve.

TRIPL-SEAL

Positive sealing at three essential points in the valve is adequately provided for—a back seat with valve in open position,—the multiple diaphragms,—and a packing around the stem. (This packing insures constant seal between pressure lines and diaphragm chamber.)

The stem of the TRIPL-SEAL Valve is provided with a sixty degree bevel, thus procuring the most desirable wedging action for positive and easy closing. It is manufactured from Tuf-Stuf, a strong, corrosion-resistant alloy.

The stem does not rotate, and is constantly guided into the same position against the seat by a cylindrical guide, so processed as to eliminate any possibility of distortion.

The body and cap of the valve are forged brass to eliminate seepage and to withstand frost action; mounting lugs are forged integrally with the body to provide the ultimate in mounting strength.

The hand-wheel is exceptionally strong, and is so designed that it provides a convenient grip for manual operation.

Valves are furnished in two-way, three-way, and angle type—flared or solder type ends—and in complete range of all necessary sizes.

Order through your jobber.

MUELLER BRASS CO.

PORT HURON, MICHIGAN

ORDER THROUGH YOUR JOBBER... ONE SOURCE OF SUPPLY... SAVES YOU TIME AND MONEY

Superior QUALITY FITTINGS

...designed especially for use in refrigerating systems where they must withstand wide fluctuations in temperature, plus considerable vibration. Machined from brass forgings and relief-annealed extruded brass rod to assure uniform density—maximum strength—freedom from season cracking—total absence of seepage leaks.

All threads machined to medium fit (SAE Class 3). Flare threads and faces protected by cardboard ferrules.

SUPERIOR QUALITY FITTINGS are recommended for, and used extensively by refrigeration, machine tool, marine, refining, liquefied petroleum gas, and many other industries.

SUPERIOR FITTINGS SPECIFICATIONS

Standard of the Refrigeration Tables and Fittings Association and the Society of Automotive Engineers	1/8"	1/4"	3/8"	1/2"	3/4"	1"	1 1/4"	1 1/2"	2"	2 1/2"	3"	4"	6"	8"	10"	12"
Pressure (PSI)	150	150	150	150	150	150	150	150	150	150	150	150	150	150	150	150
Temperature (°F)	-100	-100	-100	-100	-100	-100	-100	-100	-100	-100	-100	-100	-100	-100	-100	-100
Weight (LBS)	0.1	0.2	0.4	0.7	1.2	2.0	3.5	5.5	9.0	14.0	22.0	35.0	55.0	85.0	130.0	200.0

IF YOU HAVEN'T A COPY OF CATALOG R2, REQUEST ONE TODAY

SUPERIOR

VALVE & FITTINGS COMPANY
PITTSBURGH 26, PENNSYLVANIA

OFFICES IN PRINCIPAL CITIES - WEST COAST STOCK - LOS ANGELES (15) - JOBBERS EVERYWHERE

Mull Outlines Formulas For Determining Condenser Sizes

(Concluded from Page 20, Column 5)

Double tube condensers are usually made of two copper tubes, one within the other, and the assembly coiled for compactness. The refrigerant passes down between the outer and inner tubes, and water passes counter-flow within the inner tube. Tube sizes may vary from 3/4 inch to 1 inch O.D. for the outer tube and 1/2 inch to 3/4 inch for the inner tube. The passes of refrigerant and water may be divided into two or more circuits, depending upon the size.

It may be well to note, said the speaker, that this type is actually a combination water cooled and natural convection air cooled condenser. The hot refrigerant gas inside the outer tube creates a flow of air past the surface, thereby accomplishing some cooling effect.

Shell and tube condensers consist of straight copper tubes, often finned; rolled or brazed into steel tube sheets, completely enclosed in steel shells. Shells of copper with tubes and tube-sheets of cupro-nickel are used for marine application. Refrigerant enters the shell and passes down over the outside surface of the tubes, the shell acting as a liquid receiver.

Spacing the Fins

Water flows inside the tubes in multi-passes. The heads of the shell may be partitioned off to form two or more water circuits. Tubes are usually 3/4 inch O.D., and spiral fins, when used, range from 1/16 inch to 1/4 inch in height, spaced from nine to 16 per inch. The 1/16 inch fin is integral with the tube.

Shell and coil condenser are similar to the shell and tube type, except

that finned copper tube bundles or helical coils are used, placed inside the steel shells. Spiral fin tubes are generally used, with tube sizes ranging from 3/4 inch to 1 inch O.D. and fin heights from 1/16 inch to 1/4 inch spaced from six to nine per inch. This arrangement permits cleaning only by chemical action, while the shell and tube condenser can be cleaned mechanically by removing the shell heads.

Roughly, the surface required per ton of refrigeration is 10 sq. ft. for the double tube type, 12 sq. ft. for the shell and tube type (bare tube), and 24 sq. ft. for the shell and coil type at 50° evaporative temperature, according to Mr. Mull. Water cooled condensers are made to cover the complete range of commercial condensing unit sizes.

Finding the Total Surface

The problem of designing air and water cooled condensers is chiefly a problem of heat transfer; that is, the determination of the amount of total surface required to handle a certain heat load, declared the McCord engineer.

The volume of standard air required for a forced air cooled condenser is easily obtained by dividing the heat load by the temperature rise of the air times the constant 1.085.

Volume of water for a water cooled condenser is similarly obtained by dividing the heat load by the temperature rise of the water times the constant 500. The temperature rise in either case is a function of the initial temperature difference of the cooling medium and the refrigerant condensing temperature.

Some Ask the Impossible

This temperature rise can never be greater than the initial temperature difference, although condenser manufacturers are often asked to accomplish this feat. With the volume of air known, the face area of the air cooled condenser is obtained by dividing the air volume by the air velocity desired, usually around 500 ft./min.

With the volume of water known, the size of tubes and number of circuits of the water cooled condenser are easily obtained from the velocity of water desired, usually from 2 to 4 ft. per sec.

Assuming that the coefficients of heat transfer for the surface to be used are established, the next step involves the calculation of the total surface required. Mr. Mull described the following method of calculation.

If the coefficient of heat transfer or "K" factor for the proper condition is expressed in terms of B.t.u./hr. — "LMTD" — sq. ft. total surface, the total surface may be determined, as follows:

- (1) $J = \text{Loge} \frac{(\Delta t)}{(\Delta t - t_r)}$
- (2) $TS = \frac{J \times A}{K}$ for air cooled condensers.
- (3) or $TS = \frac{J \times W}{K}$ for water cooled condensers.

When:
t = Temp. diff. (Condensing temp. — initial air or water temp.)
tr = Temp. rise (air or water)
A = Std. Air Volume, c.f.m. x 1.085
W = Water Volume, g.p.m. x 500
K = Coefficient of heat transfer
TS = Total surface

Knowing the total surface factors for the surface in question either in sq. ft. per sq. ft. of face area per row or sq. ft. per ft. of tube, the

depth of the air cooled condenser or the number of feet of tubing in the water cooled condenser can be found.

If the size of the condenser is already established and it is desired to obtain the capacity in B.t.u./hr. for a given set of conditions, the following equations may be used:

- (4) $D = \text{Anti-Loge} \frac{(K \times TS)}{(A)}$
- (5) $C = \frac{\Delta t (D-1) A}{D}$ for air cooled condensers, or
- (6) $D = \text{Anti-Loge} \frac{(W)}{(\Delta t (D-1) W)}$ for water cooled condensers, when C is the capacity in B.t.u./hr.

It is interesting to note, said the speaker, that in the case of air cooled condensers, the secondary surface is on the air side; while for water cooled condenser, the secondary surface is on the refrigerant side.

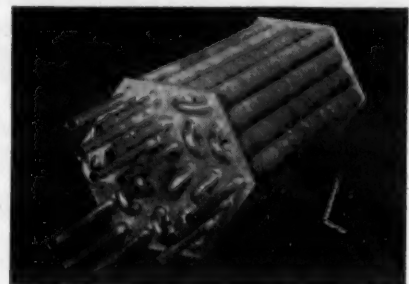
This is readily explained, he said, by a study of the individual film coefficients for air, water, and refrigerant.

Air film coefficients may vary from 6 to 12 B.t.u./hr./sq. ft./°T.D., water from 600 to 1,000, and in the case of "Freon-12" refrigerant, from 200 to 300.

With air and "Freon-12" it is seen that the "bottleneck" is the air film, while with water and "Freon-12" the "bottleneck" is the "Freon-12" film.

GENUINE
MAYFLOWER
CONDENSING UNITS AND PARTS
Jobber Inquiries Invited
A complete line backed by nearly a quarter century of user confidence. Write for prices.
MAYFLOWER PRODUCTS, INC.
13 S. 5th St., Richmond, Ind.

ROME-CONDENSER ★ Jointless Type ★



Rome Water Cooled Condenser Coils insure trouble-free condensing equipment. Used by leading compressor manufacturers.

ROME - TURNEY RADIATOR COMPANY

222 CANAL ST.
ROME, N. Y.



GUNPOWDER AND FOOD both fight for freedom

Today, thanks to technical advances in powder making, plus refrigeration and air conditioning, there is so little variation in powder that gunners know exactly what shell velocity will be. The result? A more accurate gun fire that has contributed to important American victories. Refrigeration and air conditioning keep powder at the correct temperature and humidity levels, not only in the making of the powder, but also in storage places ashore and in powder magazines aboard ship.

Good wholesome food also fights for freedom both on the battle and home fronts! It must, however, be protected from spoilage and bacteria by proper refrigeration.

Brunner condensing units are playing a vital part in the making and storing of

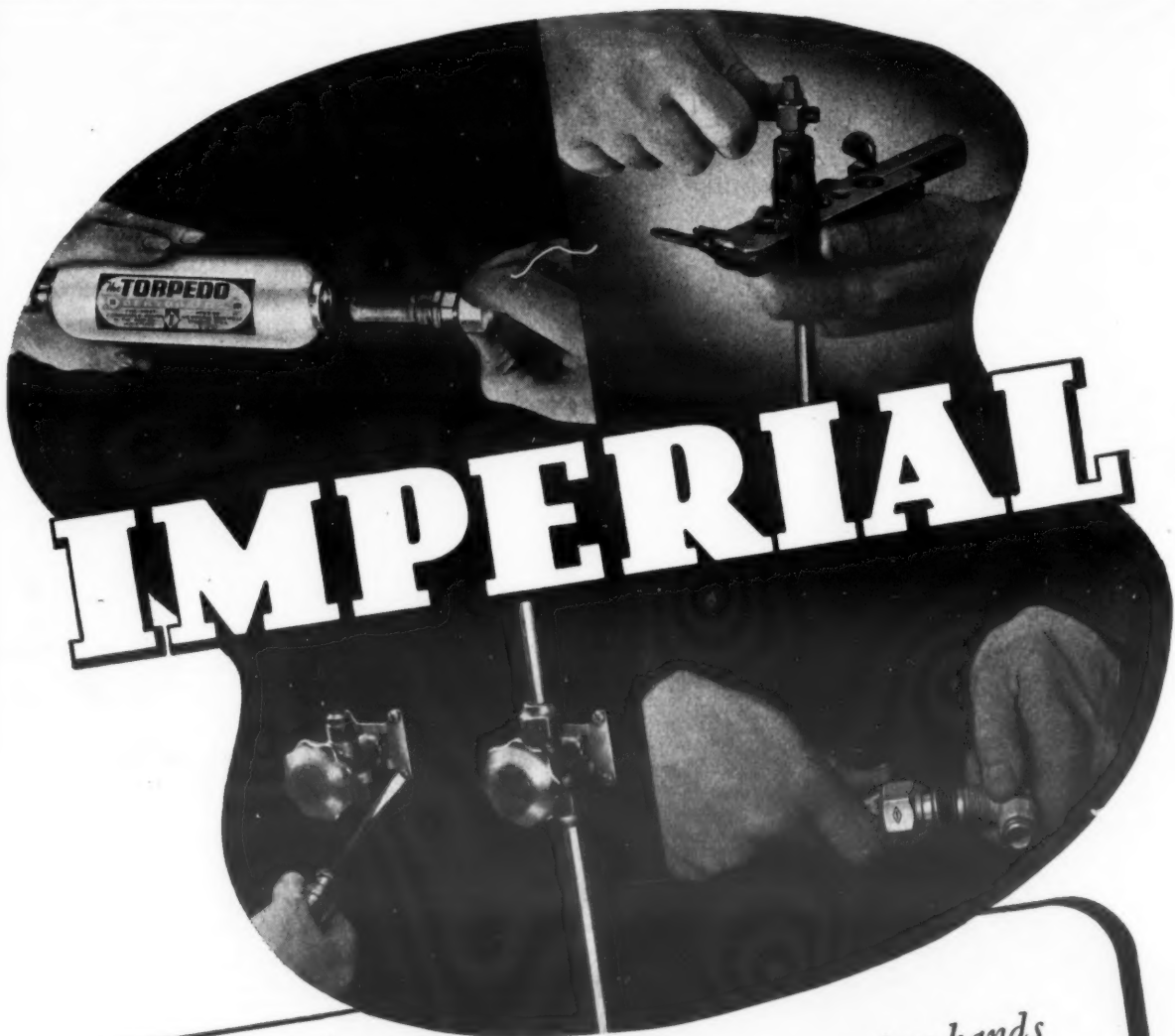
gun powder as well as in the preservation of our nation's—and that of our allies—food supply on all fronts. The lessons we are learning in the production of condensing units for rapidly multiplying applications essential to the winning of the war, will be applied to good advantage in the production of even more efficient peacetime equipment.

BRUNNER—the symbol of a better day to come—when refrigeration and air conditioning will widen our zones of production—and of well-being—in a world at peace.

Why not consult our engineers—experts in commercial and industrial refrigeration and air conditioning—on any temperature or humidity problem? Brunner Manufacturing Company, Utica, New York, U. S. A.



For over 36 years the Symbol of Quality



Quality Products that are helping busy wartime hands keep America's refrigeration and air conditioning systems operating . . . Fittings, Valves, Dehydrators, Tube Working Tools and Service Specialties.

THE IMPERIAL BRASS MFG. COMPANY
565 South Racine Avenue, Chicago 7, Illinois



NEW TYPE REPLACEMENT SEAL SPARTON and TRUKOLD

Eliminate Old Bellows Type Cup Seal

Write for Descriptive Literature and Price

WOOLSEAL CORPORATION

293 EAST 149TH STREET

BRONX 51, N. Y.

WHERE EVERY
SERVICE MAN LOOKS
FIRST FOR
REFRIGERATION
PARTS & SUPPLIES

WRITE FOR CATALOG

THE HARRY ALTER CO.

1728 S. Michigan Ave.
Chicago, 16, Ill.

Two Big Warehouses
to Serve You

134 Lafayette St.
New York, 13, N.Y.



Army Refrigeration Problems

By P. B. Reed

Manager, Refrigeration and Air Conditioning Division, Perfex Corp.

Compressor Shaft Seals (Part 5)

REPLACEMENT SEALS

Early in the history of electric refrigeration, service men experienced some difficulty in having on hand or getting promptly any one of the many different types and sizes of seals from many different factories. Moreover, some makes became "orphans" (were no longer made) and genuine replacement seals were either not obtainable or at best were difficult to obtain.

So the replacement type of seal was produced in different sizes and specialized shapes and variations to meet the many demands for replacement seals. Although this type of seal has been used as original equipment on some makes, its widespread use has been mostly confined to the replacement of the original seal, whether this original seal were still obtainable or not. The availability of these replacement seals has facilitated the work of many independent service men and allowed

them to keep in service many orphans, seals for which were not available.

The replacement type seal has been made in several types, most of which have not used diaphragms nor bellows, but have depended on some form of rubberized packing between the seal nose and shaft as in Fig. 12, or between the nose and the housing as in Fig. 13.

Most of these replacement seals can stand very little end-play of the shaft for they have no bellows nor diaphragm to absorb end movement. In the style shown in Fig. 12 the spring pushes the nose and packing along the shaft but it is, of course, slow in responding.

The replacement seal shown in Fig. 13 provides for end-play by means of a "sleeve-lock" which is a ring of molded neoprene that rolls endwise in a recess in the retainer plate if end-play pushes the sleeve inward or outward. Also the sleeve lock prevents excessive pressure of the nose on the seal ring.

The rotating seal ring is pushed against the neoprene gasket between it and the shaft shoulder by the pressure of the nose on the end of the stationary sleeve—stationary,

that is, in that it does not resolve but is free to move lengthwise as the shaft may "float."

This very ingenious arrangement also permits some self-alignment of the nose to the ring and likewise reduces the wattage consumption over some types of replacement seals.

THE ENEMY DIRT

Greatest enemy of a shaft seal is dirt. The seal depends entirely upon the almost perfect fit of the lapped sealing faces of the seal nose and the seal ring that bear on one another. If a very small piece of dirt or abrasive of any kind gets in between these finely lapped faces they will be cut and scored and their near-perfect fit against one another will be destroyed and gas will leak through.

It is therefore very important that not only must the seal itself be kept extremely clean but, since oil comes over to the seal, the crankcase must be clean; and since dirt or other foreign matter is picked up in all parts of the system and carried into the crankcase by the circulating refrigerant, it necessarily follows that

(Concluded on Page 23, Column 1)

Fig. 12 - Replacement Seal

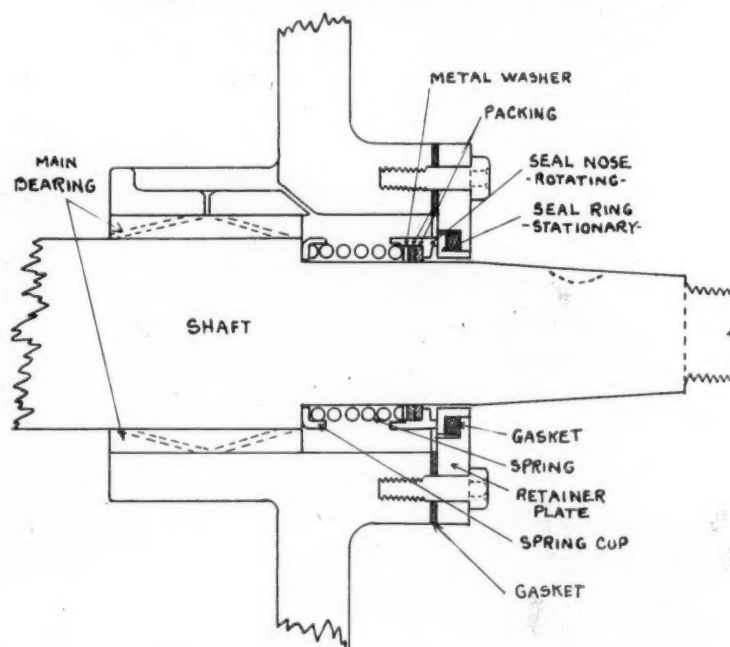
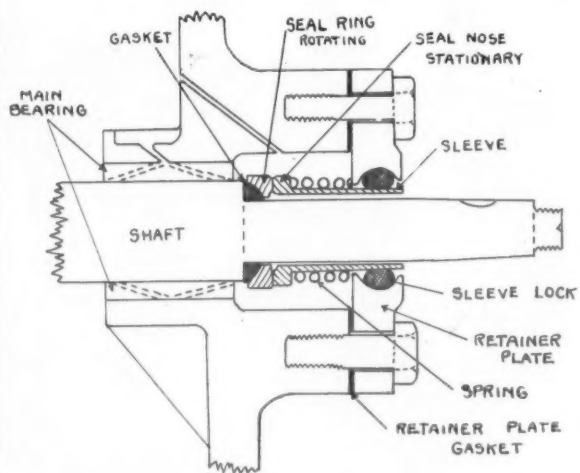


Fig. 13
Replacement
Seal with
'sleeve lock'



YOU'LL ALWAYS GET
EASY BENDING
... IN WOLVERINE TUBING

BUY
WAR
BONDS

WOLVERINE
TUBE DIVISION

CALUMET & HECLA



CONSOLIDATED COPPER COMPANY

1411 CENTRAL AVENUE • DETROIT 9, MICHIGAN
In Canada: UNIFIN TUBE CO., LONDON, ONT.

... TOGETHER WITH
**CLEANLINESS, DRYNESS
AND UNIFORMITY**

**EASY
TO CARRY
EASY
TO USE**

**POSITIVE • QUICK • CLEAN
LEAK DETECTION
CONSERVE
IRREPLACEABLE
REFRIGERANT GASES**

Ask Blotorch Bill



Halide Leak
Detector (may
also be used
as Hi-Heat Al-
cohol Bio-
torch)



Penk
THE
MANUFACTURING CO.

NEWTON LOWER FALLS 62, MASS.
ADDRESS: POST OFFICE BOX 8-A

Replacement Seals And Seal Problems

(Concluded from Page 22, Column 5)

the entire system be kept clean. More seal leaks are caused by dirt or other foreign matter in the system than by defects, lack of lubrication, and all other causes combined. Start out with a clean system and keep it clean and the possibility of having a seal leak is greatly reduced.

ANOTHER ENEMY—MAL-LUBRICATION

Lack of lubrication is Seal Enemy No. 2. A shaft seal is, in a sense, a thrust bearing and like any other bearing, must be lubricated. Most seals get all the lubrication they require from oil seeping through the main bearing, although positive methods are used such as leading oil to them under pressure from an oil pump.

Another function of the oil is to help carry away the heat generated by the friction of the nose rubbing on the seal ring. The frictional heat may be high on those seals in which the nose bears hard on the seal ring or in which the peripheral speed is high due either to a large-diameter nose or a high R.P.M. of the compressor, or both.

A low oil level is often the cause of seal failure.

INTERIOR PURITY

Chemicals put into the system for various purposes, frequently attack the materials of the seal nose, seal ring, or packing rings; or they may promote "copper plating" which may cause the deposit of copper on the seal faces (seal ring, and/or seal nose), and in a short time the seal leaks due to damage to the delicate sealing faces by the copper.

PROPER OIL

Certain types of oils with methyl-chloride, "Freon," or halogen refrigerants may cause copper plating, particularly if there is an appreciable amount of moisture in the system, even though there is not enough moisture to cause freeze-up at valve needles.

Use only the oil recommended by the manufacturer of the compressor

and put in the system no chemicals or other substances not specifically approved by the compressor manufacturer.

THE HALIDE TORCH

Before the advent of the Halide torch it was difficult to definitely determine if a seal on a methyl chloride or "Freon" compressor was leaking unless the leak was so large that it was visible. A small leak was only detectable by removing the compressor from the base, attaching a refrigerant drum to it to obtain a pressure, and submerging the compressor under water.

Now, thanks to the Halide torch, the seal may be tested quickly, effectively, and easily. Not only can it be determined if the seal is leaking but the exact location of the leak can be determined; that is, whether it is leaking at the seal faces or, as sometimes occurs, the leak is at one of the gaskets.

Sometimes merely tightening up on a gasket stops the leak. The Halide torch has been a great boon to the testing of seals on compressors using methyl chloride or the "Freons."

Viking Air Conditioning Appoints Export Firm

CLEVELAND—Polak, Winters & Co., San Francisco export and import firm, has been named by Viking Air Conditioning Corp. here to handle the company's first foreign distribution, announces Marion I. Levy, Viking president.

Hitherto limiting its sales to United States and Canada, Viking will seek to expand its coverage through the export firm to South and Central America, the Philippines, Dutch East Indies, China, and India, said Mr. Levy. Daniel Polak of the San Francisco firm will direct Viking exports.

New Shop In Mojave

MOJAVE, Calif.—Mojave Electric & Refrigeration Co. is the firm name under which J. W. McCullopp and John T. Morrison have published a certificate that they are conducting business in Mojave, Calif.

ANSUL



ST IN REFRIGERANTS

Ansul was first in America to produce Sulfur Dioxide for refrigeration (1915).

At the demand of the growing fractional-tonnage household refrigeration industry, Ansul began production of Methyl Chloride.

Ansul still analyzes *individually* every cylinder before it is shipped because—

The purity, dryness, and safety of handling of Ansul refrigerants are still top standards of a high-specification industry which Ansul is proud to have pioneered.



REG. U. S. PAT. OFF.

ANSUL CHEMICAL COMPANY

"NOW IN OUR 30TH YEAR"

MARINETTE, WISCONSIN

AGENTS FOR KINETIC'S "FREON-11," "FREON-12" AND "FREON-22"

"Measured" Cold

TO MAKE CABINET COOLING
Selective...
THROUGH MORE ACCURATE RATINGS
Precise
BY CORRECT TEMPERATURE AND HUMIDITY CONTROL

A POST-WAR PRODUCT OF A PRE-WAR REFRIGERATION PIONEER

By directing a modulated flow of cold air to every corner of the cabinet—and by eliminating all dead air pockets—this new M&E ceiling unit holds a precise, rated cabinet temperature while maintaining a high relative humidity. It reduces dehydration and weight loss without producing sliming—and it is completely automatic, including defrosting. ★ Inquiries invited now.

Manufactured by
MERCHANT & EVANS CO.
2035 WASHINGTON AVE., PHILA. 46, PA.
CONDENSING UNITS • FIN-TYPE COIL PRODUCTS

FOR MEAT, PROVISION, and all ABOVE-ZERO APPLICATIONS

M&E
EST. 1856

ARMY
NAVY

Plant: Lancaster, Pa.

new PENN water valve turns...



Thumbs down on sticking seats!
Thumbs down on rusty range springs!

In its new Series 246 Water Regulator, PENN has banished these troubles for good. How? By keeping water right where it belongs—away from sliding parts. Thus there's no sedimentation, no corrosion or rust to mar their smooth performance. Premature wear is avoided... and dependability assured.

The PENN 246 is extremely sensitive to changes in refrigerant head pressure... yet free from water hammer, too! It's available in two styles—flanged and threaded—and in a wide capacity range. Ask for the full information awaiting you in your free copy of Bulletin R-1986. Write Penn Electric Switch Co., Goshen, Ind. Export Division: 13 E. 40th Street, New York 16, U.S.A. In Canada: Powerlite Devices, Ltd., Toronto, Ont.

PENN

AUTOMATIC CONTROLS

FOR HEATING, REFRIGERATION, AIR CONDITIONING, ENGINES, PUMPS AND AIR COMPRESSORS

Henry

ABSO-DRY—PRESSURE SEALED DRYER

Most efficient due to the exclusive Henry vacuum drying and pressure sealing process. Escape of dehydrated air when seal cap is removed proves unit is absolutely dry! Soldered brass shell with dispersion tube and dehydrant compression spring. Choice of Silica Gel or Activated Alumina.

Write for Catalog
ASK YOUR JOBBER ABOUT IT

Henry Valve Company
1601 N. SPALDING AVE. CHICAGO



Graybar To Be Crosley Outlet In Providence

CINCINNATI—Appointment of the Graybar Electric Co., Inc., of Providence, R. I., as distributor for Crosley in the state of Rhode Island has been announced by E. C. Brode, manager of distribution, The Crosley Corp.

Elliott Lum is in charge of the operation of the Graybar branch in Providence. Mr. Lum has been associated with Graybar for the past 35 years.

Let Us REBUILD Your Old Pumps NOW

● At this time Grunow has a better opportunity to help you put your stock in order for the rush period. So send us your old stators and pumps now for Grunow factory rebuilding service. These pumps are completely rebuilt by experienced Grunow craftsmen and are tested for durable, serviceable operation. The care and attention given to their assembly enables Grunow to guarantee these pumps to give satisfactory performance.

Write for name of your local Distributor!

Send for Grunow Service Bulletin

Price 50c

Grunow

AUTHORIZED SERVICE, INC.

4313 W. Fullerton Avenue, Chicago, Illinois



FACTORY TESTED PARTS



If you've never handled the Mills Compressor—get one.

See if you ever had, or could have anything better. In performance it will take a beating!

MILLS INDUSTRIES, INCORPORATED

4100 Fullerton Avenue • Chicago 39, Illinois

Off the Chest

A VETERAN WHO SEEKS A REFRIGERATOR LINE

98-21 65th Ave.
Forest Hills, L. I.

Editor:

I am a veteran of this war. I would like to open my own refrigeration shop in the near future, for servicing and installation.

When the new refrigerators are released I would like to have an agency of one or more of the popular makes.

Therefore, I am wondering if you could give me any advice as to the necessary procedure of obtaining the agency.

MILTON MARKOWITZ

-- AND A SOLDIER WHO WOULD GET INTO THE FIELD

482nd QM Ref. Co.
APO 706, c/o PM
San Francisco, Calif.

Editor:

After the war is over I would like to start into business in or around New York City. I am interested in being a refrigeration jobber or being a factory representative of refrigeration or air conditioning equipment. Any help or information on the subject will be greatly appreciated.

SGT. RICHARD F. MEATES

PROBLEMS OF DESIGNING FROZEN FOOD DISPENSER

Charles Davies
Industrial Designing
Product Engineering
11 W. 42nd St.
New York, N. Y.

Editor:

I have noted your very interesting article in the Dec. 18 issue on the Self-Service Frozen Food Dispenser. It might interest you to know that I was responsible for the development of this unit, both from the mechanical end and the visualization, as I was retained by the Refrigerator Corp. of America.

In reading the article, I note that one rather important feature has not been mentioned. If the customer should wish to return the package because she has changed her mind, she simply drops it right back into the trap door which is behind the service door. The package then falls down into the bottom of the cabinet, which is, at the same time, a storage space.

Needless to say, you will appreciate the fact that the development of the mechanism presented a number of problems. The hardest nut to crack was to design a means of connecting the outside pull handle to the inside operating mechanism in such a way as to prevent this outside handle from getting too cold and consequently serving as a collector of snow and ice that would form from the condensed moisture in the air.

CHARLES DAVIES

'KEEP SOUNDING THE WARNING ON CIO'

The Piper Co.
23 South Hanover St.
Baltimore (1), Md.

Editor:

Your editorial "CIO Prepares to Take Over the Country" is a sound warning to all freedom loving Americans.

I do hope our Industry will heed your warning and be one of many that will see what CIO is after. Politics has been the real scourge of this country, but if Communism is to try and take over America, God only knows what will happen to us.

Keep sounding the warning—someone has to start waking the people—it happened in many European and Asiatic countries, and now they are trying for others, including good old America.

E. W. PIPER, President

NEAR TRAGEDY AVERTED FOR E. V. DUNBAR

E. V. Dunbar Co.
Manufacturers' Representative
P.O. Box 38, Northside Sta.
Atlanta, Ga.

Editor:

I have read with a great deal of personal interest your recent editorial regarding the personal losses of our mutual friends in the industry and feel that your editorial was beautifully expressed.

As a father of two sons serving in the United States Navy, one in the Atlantic and one in the Pacific, I can fully appreciate your personal loss, and hasten to express my heartfelt sympathy.

On Dec. 17 at 2:00 in the morning, my home was totally destroyed by fire, and had not my 16 year old son arrived home from the post office, where he was working during the holidays, his Mother and I would have been trapped in the fire. But through his heroism we were saved just in the nick of time.

All the casualties of war are not necessarily on the battle front, and men like John Wyllie have made just as great a sacrifice for their country as have the men on the firing line.

E. V. DUNBAR

NOT FOR THE WORLD

Bader's Sales & Service
508 Lee Ave.
New Brunswick, N. J.

Editor:

One of my men in the armed forces requested a subscription to your paper. Will you please forward him the NEWS for one year, check for \$4 enclosed.

Tell George to keep up the good work. I wouldn't miss his "Inside Dope" for the world.

FRANK R. BADER

Canadian Refrigeration Journal

The only publication servicing
the industry in Canada

National Business Publications
Limited
Gardenvale, Que. - Canada



Dependable Refrigerants
VIRGINIA SMELTING CO.
WEST NORFOLK, VIRGINIA

AUDELS REFRIGERATION and AIR CONDITIONING GUIDE

JUST OUT! 4 Books in One!

- Covering:
1. Basic Principles, Servicing, Operation, Repair of Household Refrigeration
 2. Special Refrigeration Units
 3. Commercial & Industrial Refrigeration
 4. Air Conditioning Systems

A gold mine of essential important facts for ENGINEERS, USERS AND SERVICE MEN. Here you have at your fingers' ends a Complete Library in ONE VOLUME, the necessary data you have been looking for on: MODERN UNITS, SYSTEMS AND MACHINES, REFRIGERANTS, REFRIGERATION.

Including Freon, Quick Freezing, Lockers, Water Coolers & Air Conditioning Systems.

ANSWERS YOUR QUESTIONS.

1280 Pages, 46 Chapters all Fully Illustrated & Indexed for Ready Reference.

4 COMPLETE • PAY ONLY \$1 A MONTH

Get This Information for Yourself, Mail Coupon Today—No Obligation Unless Satisfied. ASK TO SEE IT.

AUDELS Publishers, 49 W. 23 St., N. Y. 10

MAIL AUDELS NEW REFRIGERATION GUIDE for free examination. If O.K. I will send you \$1 in 7 days; otherwise \$1 monthly until price of \$4 is paid. Otherwise I will return it.

Name _____

Address _____

Occupation _____

Employed by _____ R-15

This of novel already in store frozen low but top to add sales ap di

Hus Dis

ST. L. erated d service s developed announce Inc., sal firm.

Experi have bee case will present Producti company

As can graph, th is fronte merchand Frozen f open, the covers ab be move

The case nate the into the said.

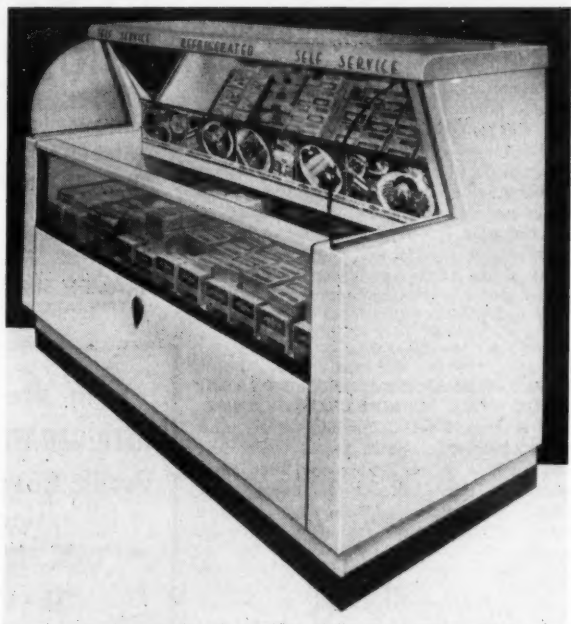
Running the top is which is

Se S

76 BEA Agents

For Frozen Food Dispensing In Retail Stores

This display case of novel design has already been tested in stores that retail frozen foods. It is low built with open top to make packages readily accessible. A mirror along the top is employed to add mass and sales appeal to the display.



Hussmann-Ligonier Frozen Food Display Case Has Open Top

ST. LOUIS—An open-type refrigerated display case designed for self-service sales of frozen food has been developed by Hussmann-Ligonier Co., announces Hussmann Refrigeration, Inc., sales subsidiary of the parent firm.

Experimental models of the unit have been tested in stores, but the case will not go into production until present restrictions of the War Production Board are relaxed, the company says.

As can be noted from the photograph, the display section of the case is fronted with glass, permitting the merchandise to be readily seen. Frozen food storage compartment is open, there being no sliding doors or covers above the space that have to be moved to select the packages. The case is so designed as to eliminate the need for reaching deep down into the unit for merchandise, it is said.

Running full length of the case at the top is a mirror set at an angle, which is not used "to show the mer-

chandise but merely to add mass and sales appeal to the display," states the Hussmann announcement.

No details as to the size of the case or capacity of refrigerating unit were announced, but the company does state that the new case is patterned after open-type refrigerated display cases which it has manufactured in the past.

Tennessee Firm To Market Electric Irons

NASHVILLE, Tenn.—The Tennessee Valley Associated Marketers is now marketing a new type of electric iron under the War Production Board program.

The new product will be 40% bigger with its 36 sq. in. of ironing surface assuring faster ironing and less operating cost. It has a permanently attached cord with sealed-in steel unit. The weight is 5 lbs., wattage is 615, and voltage is 110.

Shortages of Steel And Aluminum Are Revealed by Krug

(Concluded from Page 1, Column 5) the critical classification, and at least a third of these would be inducted, Mr. Krug said.

The shortage of aluminum is critical only in some of the fabricated shapes, chiefly sheet aluminum for metal aircraft, amplified P. D. Wilson, WPB vice chairman for metals and minerals.

The shortage here again is one of manpower, he pointed out. There are reserve stocks of 250 million pounds of primary aluminum, but between 4,000 and 5,000 men are needed in the six great plants producing sheet aluminum.

Twenty thousand former aluminum workers are now in the armed forces, he stated. Rather than take any more, the Army Air Forces are planning to assign as many of these as it can over the next two or three months to work in the aluminum plants.

At the end of three months, it is planned, the workers will be given full release to continue aluminum production as civilians, with civilian pay.

Meanwhile the shortage is present and critical, he said. All aluminum sheet mills in the country have been notified to take no non-military requests for material, and trained men will be put to work on government orders as fast as they can be found.

Dealer Loses Priorities For L-38 Violation

NORFOLK, Va.—Priority privileges of Winston & Wyatt, Inc., dealer in commercial and household refrigerators and other appliances, have been suspended for four months beginning Jan. 10, for violations of Order L-38, announces the War Production Board.

WPB states that the firm accepted deliveries of "six new industrial or commercial refrigerating or air conditioning systems" on unapproved orders between Dec. 14, 1943, and Aug. 1, 1944, and during the same period sold and delivered nine such systems on orders which had likewise not been approved by WPB.

Opens Shop In Pomona

POMONA, Calif.—Jack Dickey's commercial and household refrigeration service operation has been moved to 430 W. Second St. here.

Hershey Letter Helps To Solve Draft Riddle

(Concluded from Page 1, Column 4) armed forces in the age group 26 through 29, and that they be taken to the fullest extent possible in the following order:

"(1) Registrants not employed in an activity appearing on the essential activities list.

"(2) Registrants whom the local board finds to be employed in relatively unimportant jobs in essential but not critical activities.

"(3) Registrants whom the local board finds to be employed in relatively unimportant jobs in critical activities.

"(4) Registrants whom the local board finds to be engaged in relatively more important jobs in essential activities.

"(5) Registrants whom the local board finds to be engaged in more important jobs in critical activities."

Most refrigerator repairmen could probably qualify for Group "4."

REACH-IN REFRIGERATORS
AVAILABLE FOR PROMPT SHIPMENT
WITH OR WITHOUT CONDENSING UNITS
(PRIORITY REQUIRED)

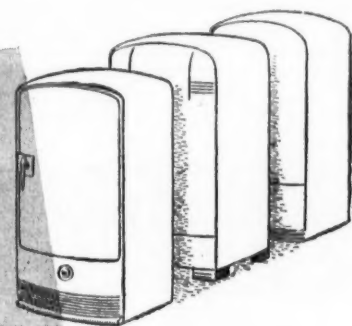
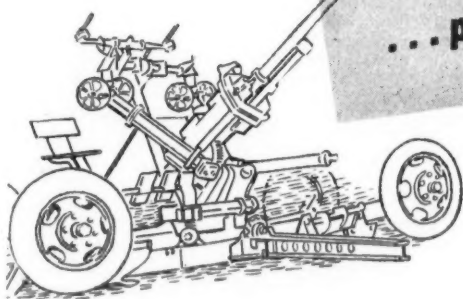
FOGEL REFRIGERATOR COMPANY Since 1899
5400 Eadom St., Philadelphia 37, Pa.



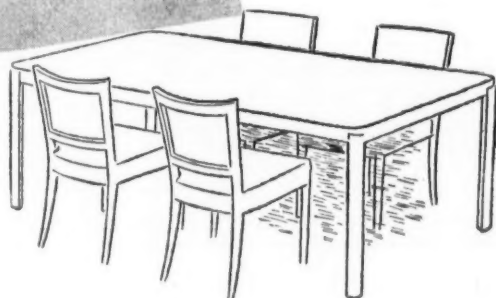
TODAY

TOMORROW'S FINISHES

... something to watch for
... wait for
... plan for!



TOMORROW



YOU'RE TURNING OUT THE TOOLS OF WAR. Or you're planning the products of peace. Whatever your finishing problem is, be sure you see Du Pont. For Du Pont sets the pace in paints. Du Pont gave industry DUCO and DULUX—now famous for automobiles, refrigerators, furniture, and a host of other products.

Du Pont offers war plants the services of skilled finish engineers, and of our Research Laboratories. Du Pont experts are answering wartime problems in hundreds of industries. They can

do the same for you. Du Pont Research continues to set the pace.

Tomorrow's Du Pont finishes will be better than ever. New materials and methods due to war have given us new knowledge for formulating and applying finishes. If your peacetime products are in the planning stage, call us in now. Our experienced "know-how" will help you plan the new finishing systems that will keep step with your products-to-be. E. I. du Pont de Nemours & Co. (Inc.), Finishes Division, Wilmington 98, Del.

DU PONT
FINISHES DIVISION

Pacemaker in Paints

BETTER THINGS FOR BETTER LIVING...THROUGH CHEMISTRY



Service Engineers Should Know ...

THE PURITY OF "VIRGINIA" SULFUR DIOXIDE IS CAREFULLY GUARDED

— the content of each cylinder — large or small — is analyzed 2 separate times.



1. CLEANLINESS TEST

A measured sample drawn from each container must be water-white in color and when boiled to dryness must leave no dirt, oil or other residue. This test detects undesirable impurities.

2. MOISTURE TEST

A sample of known weight from each cylinder is passed through P_2O_5 (a desiccant). Moisture calculated by the increased weight of the tube must not exceed 50 parts per million; low moisture prevents freeze-ups and oil-sludging.

EXTRA PRECAUTIONS

To prevent any possible contamination of "Extra Dry Esotoo" every cylinder is dry cleaned and finally rinsed with pure SO_2 before filling.

Each cylinder valve is inspected and reserviced to assure trouble-free operation — this saves time and money for the service engineer.

The name "EXTRA DRY ESOTOO" on the cylinder is your guarantee of quality. Sold by refrigeration supply jobbers everywhere.

VIRGINIA
Smelting Co.

WEST NORFOLK, VA.

76 BEAVER ST., NEW YORK 5 :: 131 STATE ST., BOSTON 4
Agents for Kinetic's "Freon-12" — "Freon-22" — "Freon-11"



1944
Refrigeration Supply
Catalog
Sent on request
REFRIGERATION EQUIPMENT CO.
101 E. 24th St., Kansas City 8, Mo.



Automatic Pressure,
Temperature and
Flow Controls

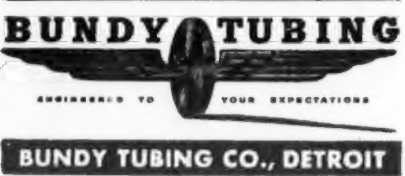
GENERAL CONTROLS
801 ALLEN AVENUE, GLENDALE 1, CALIF.
BRANCHES: BOSTON • NEW YORK • PHILADELPHIA • CLEVELAND
DETROIT • CHICAGO • DALLAS • DENVER • SAN FRANCISCO



INVENTORS - ENGINEERS
Old established manufacturer
wants new ideas for finned tubing
used in cooling, heating, and air
conditioning. Outright purchase
or royalty. Box 1669, Air Condi-
tioning & Refrigeration News.



Established 1864
CURTIS REFRIGERATION
AIR CONDITIONING
Curtis Refrigerating Machine Division
of Curtis Manufacturing Company
1912 Kienlen Ave. St. Louis, Mo.



Patented CROSS-FIN COILS—
Bare Tube Coils—
Humi-Temp Forced
Convection Units—
Zinc Fused Steel
Plate Coils—
Disseminator
Pans—

Write for New Catalogue

Refrigeration Products

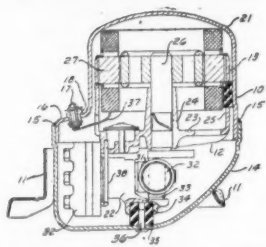
Heat Exchangers—
Evaporative
Condensers—
Instantaneous
Water Coolers—
Air Conditioning
Coils—
Industrial Units

LARKIN COILS, INC. 519 MEMORIAL DR., S. E., ATLANTA, GA.

PATENTS

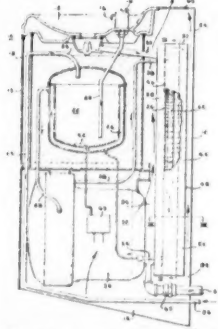
Weeks of Dec. 26 & Jan. 2

2,365,673. COMPRESSOR. Ralph L. Benson, Greenville, Mich., assignor by mesne assignments, to Gibson Refrigerator Co., Greenville, Mich., a corporation of Michigan. Original application April 11, 1942, Serial No. 438,547. Divided and this application July 15, 1942, Serial No. 450,984. 7 Claims. (Cl. 230-58.)



1. A refrigerator compressor comprising a metallic housing, a motor-compressor unit contained within said housing, said unit comprising an annular frame having a plurality of radially extending circumferentially spaced pairs of spaced apart lugs, and means for supporting said compressor unit in said housing comprising a plurality of blocks of deformable non-metallic sound insulating material seated between the lugs of each pair and extending radially outwardly beyond said lugs and engaging the side wall of the housing.

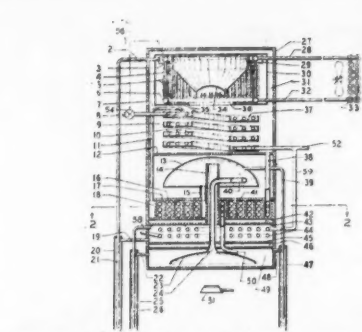
2,365,786. REFRIGERATING APPARATUS. Robert H. Tull, Wilbraham, Mass., assignor to Westinghouse Electric & Mfg. Co., East Pittsburgh, Pa., a corporation of Pennsylvania. Application Sept. 8, 1943, Serial No. 501,600. 10 Claims. (Cl. 62-141.)



1. Refrigerating apparatus for a water cooler of the bubbler type which includes a drinking water reservoir, a valve-controlled dispensing spout leading from said reservoir, and a waste cold water outlet, said apparatus comprising an evaporator, a motor-compressor, a condenser coil, a sealed heat exchange tank containing a heat exchange fluid in which said condenser coil is immersed, and a cooling coil also immersed in said heat exchange fluid and connected at one end thereof to said outlet and the other end thereof being adapted for connection to a disposal pipe.

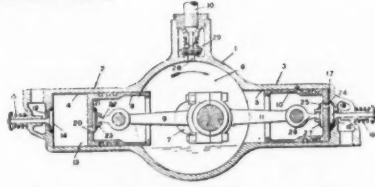
2,365,797. MEANS FOR HEATING AND COOLING. Francis R. Bichowsky, Washington, D. C. Application May 29, 1940, Serial No. 337,857. 20 Claims. (Cl. 62-119.)

1. Vacuum absorption refrigeration apparatus including a unitary hermetically sealed vessel divided into two parts one of which is maintained at a higher pressure than the other, the high pressure part containing a regenerator and a condenser and the low pressure part containing an evaporator and an absorber, thermally operated means for transferring the absorbent from the absorber to the regenerator, said means including an open unrestricted channel connecting the absorber and the regenerator, and



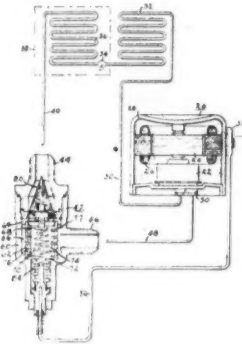
means for allowing thermal communication between the hot absorbent and the cool absorbent.

2,366,186. COMPRESSOR. Walter E. Freeman, Clayton, Mo., assignor to Wagner Electric Corp., St. Louis, Mo., a corporation of Delaware. Application Dec. 11, 1942, Serial No. 468,635. 12 Claims. (Cl. 230-192.)



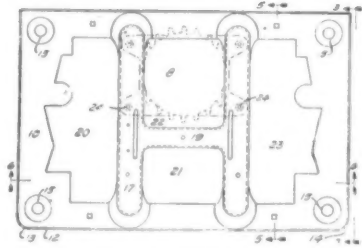
1. In a compressor, two chambers, a movable wall between the chambers, means comprising a valve for placing the chambers in communication with each other, positive means for so coordinating the operation of the valve and the movement of the movable wall that when the wall moves in one direction the valve will be closed to thereby permit the volume of which is being decreased by the wall movement and when the wall moves in the opposite direction the valve will be opened and maintained in an open condition throughout the movement in said opposite direction to permit the fluid in the chambers to interchange and assume equal pressures without any appreciable compressing action by the wall during said opposite direction movement, and means for permitting fluid to be compressed to enter the chamber which is having its volume increased during the compressing movement of the wall.

2,366,188. REFRIGERATING APPARATUS. J. Lowell Gibson, Dayton, Ohio, assignor to General Motors Corp., Dayton, Ohio, a corporation of Delaware. Application Aug. 20, 1943, Serial No. 499,319. 4 Claims. (Cl. 62-3.)



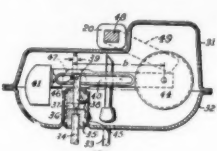
1. Refrigerating apparatus including a refrigerant circuit comprising condensing and evaporating means and a sealed motor-compressor unit for withdrawing evaporated refrigerant from the evaporating means and delivering compressed refrigerant to the condensing means, and a thermostatically controlled throttling valve means located in said circuit and responsive to the temperature of said unit for throttling the vapor drawn from said evaporating means by said compressor when said unit reaches a predetermined temperature.

2,366,284. REFRIGERATOR CABINET AND METHOD OF MAKING SAME. Earl E. Nofsinger, Greenville, Mich., assignor, by mesne assignments, to Gibson Refrigerator Co., Greenville, Mich., a corporation of Michigan. Application Dec. 19, 1940, Serial No. 370,858. 6 Claims. (Cl. 248-19.)



3. A supporting structure for a compressor-condenser unit of a refrigerator comprising a one piece pressed sheet metal base having a substantially continuous upstanding perimetral flange, a plurality of integral legs extending downwardly from said base inwardly from the perimeter thereof to space the base from the surface upon which it rests, integral ribs extending upwardly from said base to form a raised seat for a compressor unit, and a pair of spaced apart upstanding condenser supports secured to said flange on said base at one side of the latter, said brackets being adapted for attachment to adjacent edges of the vertical walls of the cabinet and having means thereon for attachment thereto of a condenser.

2,366,404. REFRIGERATING APPARATUS OF THE COMPRESSION TYPE. Rudolf Hintze, Berlin-Charlottenburg, and Anton Engelmann, Berlin-Tegel, Germany; vested in the Alien Property Custodian. Application Sept. 21, 1940, Serial No. 357,688. In Germany June 3, 1939. 2 Claims. (Cl. 137-68.)



1. A float valve for controlling the flow of liquid refrigerant in refrigerators, comprising a collecting tank, conduits connected with said tank for conducting liquid refrigerant into and out of said tank, a control valve disposed in said tank and connected with one of said conduits, a float body arranged in said tank, a lever connecting said body with said valve to operate said valve in dependence upon variations of the level of said liquid refrigerant in said tank, and an electromagnet mounted on said tank for actuating said valve independently of said liquid level, said electromagnet having a magnet body provided with two lateral limbs extending at opposite sides of said float body to move said body when energized.

(Concluded on Page 27, Column 1)

CLASSIFIED ADVERTISING

POSITIONS AVAILABLE

WANTED by old established firm, experienced service mechanic preferably with executive ability to do own work for duration, later take full charge of service and installation commercial refrigeration and air conditioning 3 H.P. and up. Attractive salary. Permanent all year position. ATMOSPHERIC CONTROL CO., 716 Marquette Bldg., Detroit 26.

WANTED. Two experienced refrigeration service men. Commercial dealer. Permanent. Monthly salary basis. State age; experience; and salary expected. MILLER ENGINEERING CO., 118 North Winnebago St., Rockford, Ill.

REFRIGERATION ENGINEER wanted by one of the leading refrigeration unit manufacturers with exceptional opportunity present and postwar. Must be able to do refrigeration laboratory work on commercial, open and sealed, condensing units and household cabinets. This position affords rapid advancement depending upon ability. Box 1656, Air Conditioning & Refrigeration News.

ENGINEER, experienced in design and manufacture of refrigeration compressors and cabinets to expand old established business now chiefly on war work. When applying give full details as to education, experience, salary required. Apply Box 1660, Air Conditioning & Refrigeration News.

WANTED: A-1 refrigeration mechanic to take charge of commercial refrigeration department for substantial, aggressive, and well established New Mexico firm. Remuneration open and will arrange on satisfactory basis. Excellent climate and living conditions. Write Box 672, Albuquerque, New Mexico for details, giving complete information.

SUPERINTENDENT and Production Foreman experienced in the production of High and Low Temperature Refrigerated Cabinets. Plant located in the East. State previous experience and salary expected. Box 1666, Air Conditioning & Refrigeration News.

OUTSIDE SALESMEN, also countermen: experienced, New York City area Supply Jobber. Permanent position. Box 1667, Air Conditioning & Refrigeration News.

SALES REPRESENTATIVE, Eastern Seaboard, by aggressive, rapidly expanding Midwestern manufacturing company. Must be energetic and steady, preferably with some knowledge of refrigeration engineering or sales experience. Exceptional opportunity present and postwar for right party. Write Box 1670, Air Conditioning & Refrigeration News.

EQUIPMENT FOR SALE

250 FRIGIDAIRE model "N." "W350." "W238." and "C." All with 110-220 V. 60 cycle. REP. IND. Motors. Remanufactured ice cream cabinets. Send for list and price. EDISON COOLING CORP., 310 E. 149 St., New York 51, N. Y.

NINE HILL 6 ft. full vision cases. Complete with coils and shelves. Porcelain inside and outside. Look like new. Late models. FLEETWOOD SALES CO., 44 Hanson Place, Brooklyn 17, N. Y. Nevins 8-4171. Michael Goldstein.

KRAMER FREEZING SHOWER

A LOW TEMPERATURE UNIT COOLER

(Below 32°)

WATER DEFROST

KRAMER TRENTON CO.
TRENTON, N. J.

In the West it's
REFRIGERATION SERVICE INC.
Pacific Coast Supply Jobber
since 1928

Your letterhead will bring our latest catalog—also our House Organ.

"The Liquid Line"



3109 Beverly Blvd.
LOS ANGELES 4, CALIF.

By comparison—
You'll buy
PAR
REFRIGERATION EQUIPMENT
WRITE FOR CATALOG
Lynch
MANUFACTURING CORPORATION
DEFIANCE, OHIO, U. S. A.

EQUIPMENT FOR SALE

REACH-INS: Porcelain self-contained and remote, all sizes. Complete stock of condensing units and diffusers. New 6-can milk coolers equipped with 1/2 H.P. General Electric compressors \$260. Walk-in all-steel coolers. Immediate shipments. Phone Rittenhouse 6359 or write JORDON REFRIGERATOR CO., 235 N. Broad St., Philadelphia 7, Pa.

FOR SALE: one Tuthill, 2 1/2 gallon freezer, self-contained, complete with 1-H.P. water-cooled compressor. New. \$975. One Sweden soft ice cream freezer, 2 qt. self-contained, complete. Last model. \$300. One Bastian-Blessing carbonator, completely overhauled and guaranteed. \$85. All of above F.O.B. Missoula, Mont. crated and ready to go. POTTER REFRIGERATION CO.

FOR SALE two 7 1/2 x 7 1/2 York enclosed type ammonia compressors complete with two 20-H.P. motors, belts, condensers, pipes, brine tank, cork, valves, etc. No reasonable price refused. E. E. BRAUNSTEIN, 61 Channel St., Taunton, Mass.

REACH-IN refrigerators, all sizes, 35 to 70 cubic feet. Some all-porcelain models. Walk-in coolers, freezers, blower coils, ice chests. Immediate delivery. FROZEN-AIRE REFRIGERATOR CO., 1327 Poplar St., Philadelphia, Pa.

POSITIONS WANTED

REFRIGERATION and appliance executive. Fifteen years experience Refrigeration and Appliance Manufacturers. Member A.S.R.E. Experience installation and service all types refrigeration and household appliances; Manufacturer's Branch Service Manager; Divisional Service Representative; Asst National Service Manager; Chief Inspector and Supervisor manufacture Service parts. Highest type references furnished upon request. Box 1664, Air Conditioning & Refrigeration News.

MANUFACTURER'S REPRESENTATIVE. Qualified Air Conditioning and Refrigeration Engineer, 17 years experience organizing and training Distributor and Dealer personnel. Recently honorably discharged Army Air Forces. Desires to represent reputable manufacturers of Commercial Refrigeration Equipment and kindred parts in Texas and surrounding territory exclusively. Financially responsible. Box 1665, Air Conditioning & Refrigeration News.

FRANCHISES WANTED

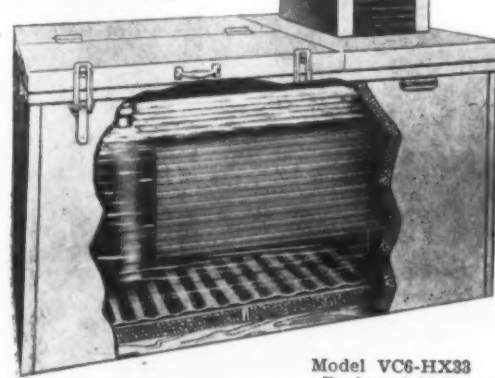
WE WISH to establish contact with men in various cities to act in the capacity of brokers for us in purchasing new and used refrigerating equipment, parts, cabinets, and allied electrical merchandise. Arrangements can be made reciprocal. Communicate with Mr. Shenker, 1250 Riverbed Ave., Cleveland, Ohio. Cherry 8170.

BUSINESS OPPORTUNITIES

FOR SALE: Refrigeration Sales & Service, excellent location and clientel. One of, if not the best equipped shop in the South. Excellent sales rooms, nice light shop, oil heated. Several nice franchises. Located in the fastest growing city in Florida. Box 1668, Air Conditioning & Refrigeration News.

Are You Getting Your Share of the Milk-Cooling Business?

VERTI-COIL
MILK COOLER



Model VC6-HX33
Packaged-Unit

WILSON

SYSTEMS OF MILK COOLING
A TYPE FOR EVERY REQUIREMENT
2. VERTI-COIL MILK COOLER

• Wilson VERTI-COIL Milk-Cooling Cabinet (U.S. Pat.) integrates in its design the tremendous cooling action of the Verti-Coil Prime Surface Plate Coil to provide a positive non-mechanical circulation of the refrigerated water bath. . . . Effectively cools all of the milk, including the hard-to-cool top milk where spoilage starts.

• The Wilson Cabinet is "Life-Tested" for long efficient life.

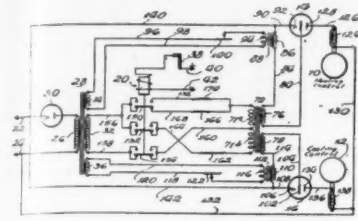
Thousands of dairymen have bought, thousands more will buy, WILSON MILK COOLERS. A share of this business can be YOURS . . . If there is no Wilson Dealer near you . . . If you have a modern organization . . . write NOW!

WILSON CABINET COMPANY
COMMERCIAL REFRIGERATION
SMYRNA DELAWARE

Patents (Cont.)

(Concluded from Page 26, Column 5)

2,366,500. TEMPERATURE CONTROL. Maurice R. Eastin, North Tarrytown, N. Y., assignor to Minneapolis-Honeywell Regulator Co., Minneapolis, Minn., a corporation of Delaware. Application May 10, 1940, Serial No. 334,363. 41 Claims. (Cl. 257-3.)



1. In a refrigerating apparatus, a cabinet having a storage chamber and an air cooling and mechanism chamber extending beneath and along one wall of said storage chamber, a three-fluid absorption refrigerating system associated with said cabinet including an evaporator in said storage chamber and an absorber, a generator, and a condenser in said mechanism compartment connected in circuit, a power driven circulator connected to circulate an inert gas between said evaporator and said absorber, said power driven circulator being located in said mechanism chamber beneath said storage chamber adjacent the central portion thereof to reduce the effect of noise produced by said circulator externally of said cabinet, and sound absorbing material on certain of the walls of said mechanism chamber.

2,366,550. REFRIGERATION. Ralph C. Osborn, North Canton, Ohio, assignor to The Hoover Co., North Canton, Ohio. Application May 2, 1940, Serial No. 332,889. 6 Claims. (Cl. 62-119.5.)

REFRIGERATION ACCESSORIES

- Instantaneous Water and Beverage Coolers.
- Oil Separators.
- Two-Temperature Valves.
- Accumulator Heat Exchangers.
- Equalizer Tanks.
- Controlled Temperature Photographic Processing Units.
- X-Ray Refrigerating Units.

TEMPRITE PRODUCTS CORPORATION

47 PIQUETTE AVENUE DETROIT 2, MICHIGAN

MASTER Food Conservators

have the call. This Modern Food Conservator has many unusual advantages. Sold through distributors of refrigeration and insulation.

Get our proposition

Master Manufacturing Corp.
121 Main St. Sioux City 4, Iowa
OVER 700,000 IN USE

NIBCO WROT

AND CAST
VALVES AND FITTINGS
for Refrigeration

NORTHERN INDIANA BRASS CO.
ELKHART, INDIANA

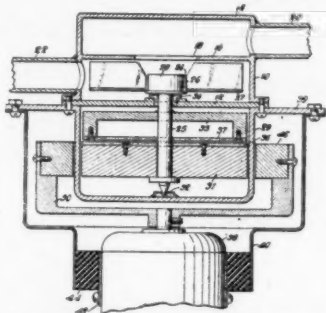
DOLE

VACUUM PLATE
COOLING and
FREEZING UNITS
CHICAGO

For: TRUCKS, LOCKERS, COOLERS, COUNTERS
AND CABINET CONVERSIONS, U.S.C.

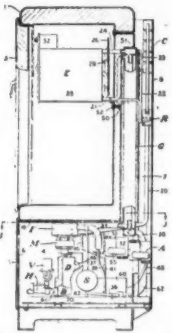
KOLD-HOLD PLATES

KOLD-HOLD MFG. CO.
LANSING, MICH., U.S.A.



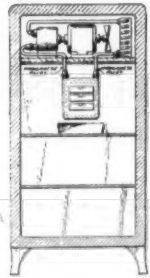
1. In a refrigerating apparatus, a cabinet having a storage chamber and an air cooling and mechanism chamber extending beneath and along one wall of said storage chamber, a three-fluid absorption refrigerating system associated with said cabinet including an evaporator in said storage chamber and an absorber, a generator, and a condenser in said mechanism compartment connected in circuit, a power driven circulator connected to circulate an inert gas between said evaporator and said absorber, said power driven circulator being located in said mechanism chamber beneath said storage chamber adjacent the central portion thereof to reduce the effect of noise produced by said circulator externally of said cabinet, and sound absorbing material on certain of the walls of said mechanism chamber.

2,366,562. REFRIGERATION. Howard L. Schug, Palo Alto, Calif., assignor to The Hoover Co., North Canton, Ohio, a corporation of Ohio. Application Aug. 9, 1943, Serial No. 497,939. 20 Claims. (Cl. 230-117.)



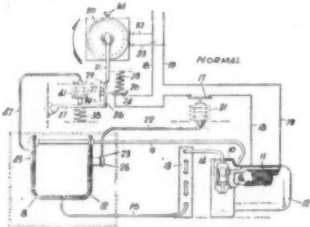
1. A medium circulator for a three-fluid absorption refrigerating apparatus comprising, a fan hermetically sealed on the interior of said apparatus, a follower magnet on the interior of said apparatus, a driver magnet mounted on the exterior of the apparatus walls adjacent the follower magnet so as to transmit magnetic lines of force through the walls of the apparatus to the follower magnet, a magnetic shunt mounted on the interior of said apparatus adjacent the driver and follower magnet so that a magnetic flux is induced therein which increases when the follower magnet falls into step with the driver magnet and means actuated by the increase in magnetic flux in said magnetic shunt when said follower magnet falls into step with said driver magnet for driving said fan.

2,366,601. STRUCTURAL ELEMENT HAVING LOW HEAT CONDUCTIVITY. Reginald S. Dean, Salt Lake City, Utah, assignor to Chicago Development Co., Chicago, Ill., a corporation of Illinois. Application May 29, 1940, Serial No. 337,823. 1 Claim. (Cl. 62-1.)



A refrigerating mechanism in which the cooling tubes are separated from the remainder of the mechanism by means of hollow members made from an alloy containing at least 50% manganese, the remainder of the alloy being substantially made up of one or both of the elements of the group copper and nickel.

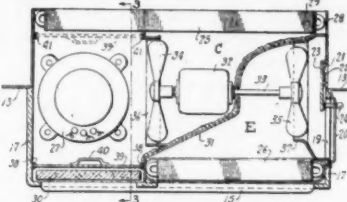
2,366,635. REFRIGERATION APPARATUS. Graham S. McCloy, Springfield, Mass., assignor to Westinghouse Electric & Mfg. Co., East Pittsburgh, Pa., a corporation of Pennsylvania. Application Jan. 7, 1942, Serial No. 425,875. 12 Claims. (Cl. 62-4.)



1. In refrigerating apparatus, the combination of a cooling unit, compensated control means for maintaining the temperature of the media in a chamber substantially constant regardless of the temperature of the media ambient the chamber, said cooling unit normally operating at mean temperatures below freezing, means for supplying said cooling unit with refrigerant, timed means for periodically effecting operation of the cooling unit at mean temperatures above freezing to defrost the same, and means responsive to the temperature of the cooling unit for again effecting operation thereof at mean temperatures below freezing when the temperature of the cooling unit has increased to a predetermined temperature above freezing temperatures.

REISSUE

22,584. SELF-CONTAINED AIR CONDITIONER. Matson C. Terry, Abington, Pa., and Paul Komroff, Flushing, N. Y., assignors, by mesne assignments to General Motors Corp., a corporation of Delaware. Original No. 2,309,224, dated Jan. 26, 1943, Serial No. 313,410, Jan. 11, 1940. Application for reissue Jan. 24, 1944, Serial No. 520,080. 28 Claims. (Cl. 62-129.)



1. In an air conditioning unit, a cabinet adapted to be disposed within a window opening, an opening at the front communicating with the inside of the space to be conditioned and an opening at the rear communicating with the outside, a cover for said cabinet, a partition separating the inside of the cabinet into two chambers and extending from a point substantially midway of the front opening diagonally toward one side of the cabinet, a refrigerating machine including an evaporator substantially covering the front opening of one chamber and a condenser substantially covering the rear opening of the other chamber, the evaporator chamber having side openings communicating respectively with the inside and outside of the space to be conditioned, a damper for said side openings adapted to uncover one or the other or a portion of each, a two way operating fan in each chamber, the condenser chamber fan being arranged normally to draw in outside air through a portion of the condenser and discharge same through another portion of the condenser, and concomitantly the evaporator chamber fan operating to draw in air and discharge same over the evaporator into the space to be conditioned, and a reversible motor for driving said fans, said fans being arranged to impart longitudinal thrusts in the same direction.

Electrimatic

AUTOMATIC CONTROL VALVES AND REGULATORS

2100 INDIANA AVENUE • CHICAGO 16, ILL.

WHEN PEACE COMES

KOCH

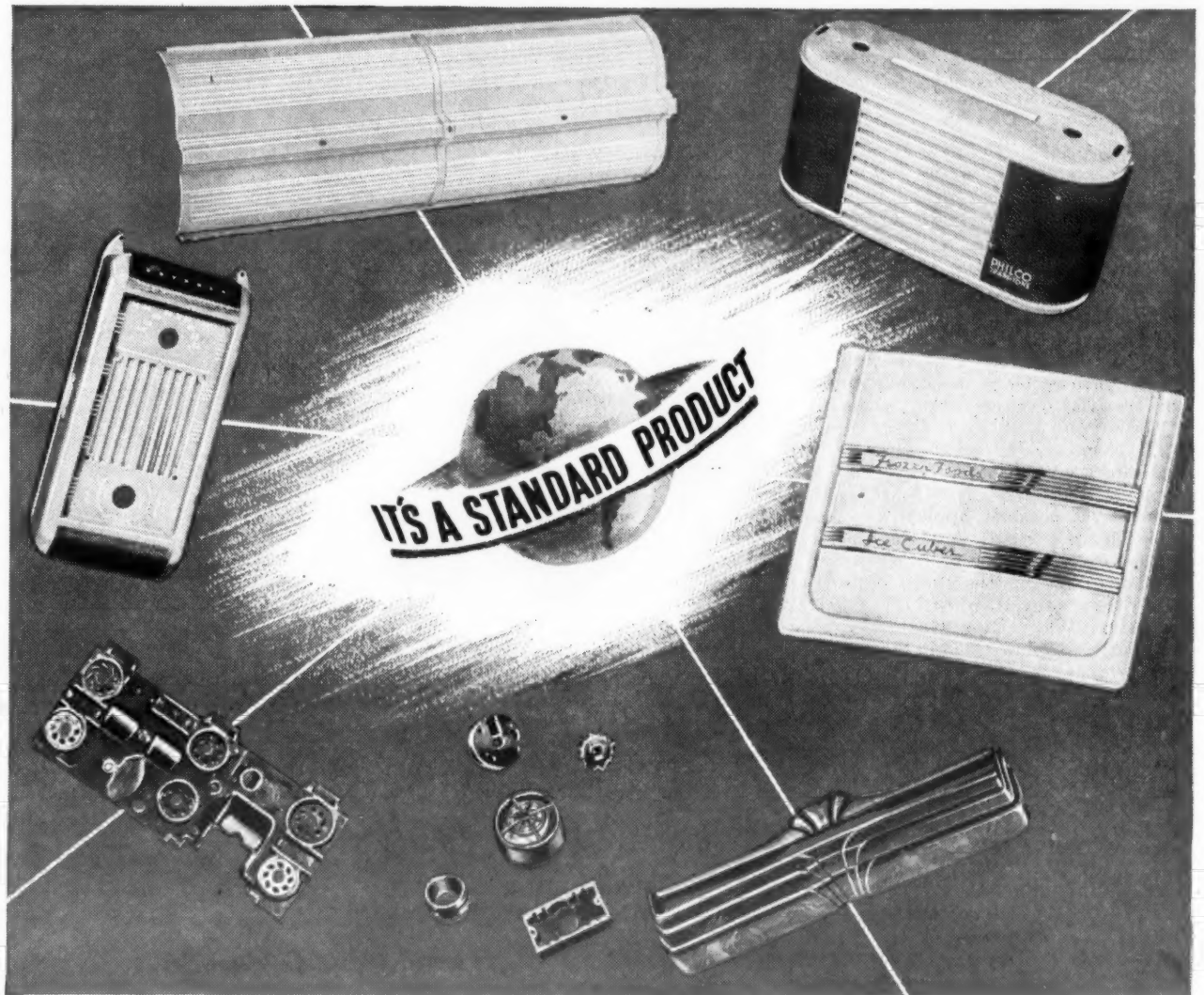
WILL AGAIN PRODUCE COMMERCIAL REFRIGERATOR EQUIPMENT FOR CIVILIAN USE

NOW SOME SELF-CONTAINED REACH-IN REFRIGERATORS ARE AVAILABLE FOR THOSE WHO CAN QUALIFY



Write — Wire — Phone

KOCH REFRIGERATORS
NORTH KANSAS CITY . . . MO.



MOLDING A Reputation

Standard Products' reputation is an inherent part of every plastic item we fabricate, our reputation in molding plastics is not accidental—but the result of years of experience, strenuous application to detail and an honest desire to produce the best at the lowest possible cost.

The Standard Products Co. modern press equipment plus new techniques in molding all combine to assure you that the Standard Products Co. will give you the utmost in molding service . . . efficiently and economically.

The Plastics Division of Standard Products is equipped to mold any plastic part, large or small, by injection, compression, extrusion, transfer or jet molding processes.

The facilities of the Standard Products' Research Laboratory and Engineering Departments are at your service. Write the Standard Products Co. if you have a plastic molding problem.

THE STANDARD PRODUCTS COMPANY

Main Offices and Research Laboratory

505 Boulevard Bldg. • Woodward Ave. at E. Grand Blvd. • Detroit 2, Michigan

You Need a Permit To Hold a Convention

(Concluded from Page 1, Column 4)

Production Board; and Charles M. Hay, deputy chairman of the War Manpower Commission. R. H. Clare, special assistant to Col. Johnson, is secretary to the committee.

The committee's job is to relieve overburdened transportation and hotel facilities and conserve materials and manpower shortages insofar as this is possible through official convention regulation.

An application form has been set up by the committee, is being printed, and will soon be available at regional and district offices of ODT, at national headquarters in Washington, and at various convention bureaus and most of the larger hotels.

Any organization planning a group meeting of more than 50 people must submit such an application. The information it requires is in the form of 12 questions, essentially as follows:

1. The name of your organization, the names and addresses of its president and secretary.
2. The nature of your organization and the character of the meeting planned (conference, trade show, governmental caucus, etc.).
3. Date and location of the proposed meeting, and what hotel or hotels or other facilities to be used.
4. Attendance planned for. If a trade show, how many exhibitors, how many buyers, how many rooms for exhibits, for personal use, what space area needed in ballrooms or display rooms, etc.
5. Previous frequency of these meetings.
6. Date, location, and attendance at last previous meeting.
7. Average attendance at these meetings before the war, and during the war.
8. From what area those attending are drawn.
9. Steps already taken or contemplated to curtail attendance.
10. Why the object of this meeting cannot be attained through correspondence and publication ("convention by mail").
11. Why a group of 50 or less to whom powers were delegated could not transact the necessary business of the organization.
12. How and to what extent the war effort will suffer if this meeting is not held.

Wherever possible, applications are to be filed not less than 30 days prior to the date of meeting, and never more than six months ahead of time. Mail them to Richard H. Clare, secretary, War Committee on Conventions, Room 7321, Interstate Commerce Commission Bldg., Washington 25, D. C.

The ban so far is no more than a "request" issued by James F. Byrnes, director of War Mobilization and Reconversion, and compliance is on a voluntary basis, but the very nature of the committee suggests the penalties that could be applied to any establishment allowing an unauthorized meeting:

The denial of manpower clearances; the withdrawal of ration allowances; the refusal of materials needed for maintenance and repairs.

United Refrigerator Co. Adds Plant Facilities

(Concluded from Page 1, Column 3)

will be handled from the St. Paul headquarters of United's sales division under the direction of Mr. Wieding.

Manufacturing equipment, dies, etc., acquired in the purchase of the Midwest and General lines, will be moved to a plant recently purchased by United at Connellsville, Pa., which will be operated as the eastern division of the company.

United's chemical division is now completing a new plant at St. Paul, to increase its manufacturing and packaging facilities for the production of silica gel, desiccant and other dessicants, now in large demand for overseas shipments of war materiel. This activity is under the supervision of Lynn G. Lindsay, executive vice president of the United affiliate.

The main refrigeration cabinet plant of United at Hudson, Wis., has been tripled in capacity during the past two years. Another cabinet plant was acquired the past year in Minneapolis.

Frigidaire Promotes 4 In Service Department

(Concluded from Page 1, Column 5)

charge of training, service literature, field shop operations and field and factory technical contacts. He, too, is a veteran of G.M. and Frigidaire, having joined Delco in 1915 and Frigidaire in 1927.

Mr. Leslie, who has replaced Mr. Ritten as supervisor of the service inventory control division, came to Frigidaire in 1928 and before this promotion was a foreman in the company's technical division.

Mr. Ritten, after 14 years in the service department, has become a staff member of Frigidaire's market research and organization department.

Hastings Will Direct American Central Sales

CONNERSVILLE, Ind. — Appointment of C. Fred Hastings as general sales manager of the American Central Mfg. Corp. is announced by Saunders P. Jones, president. Byron C. Wagner succeeds to Mr. Hastings' former position as assistant general sales manager.

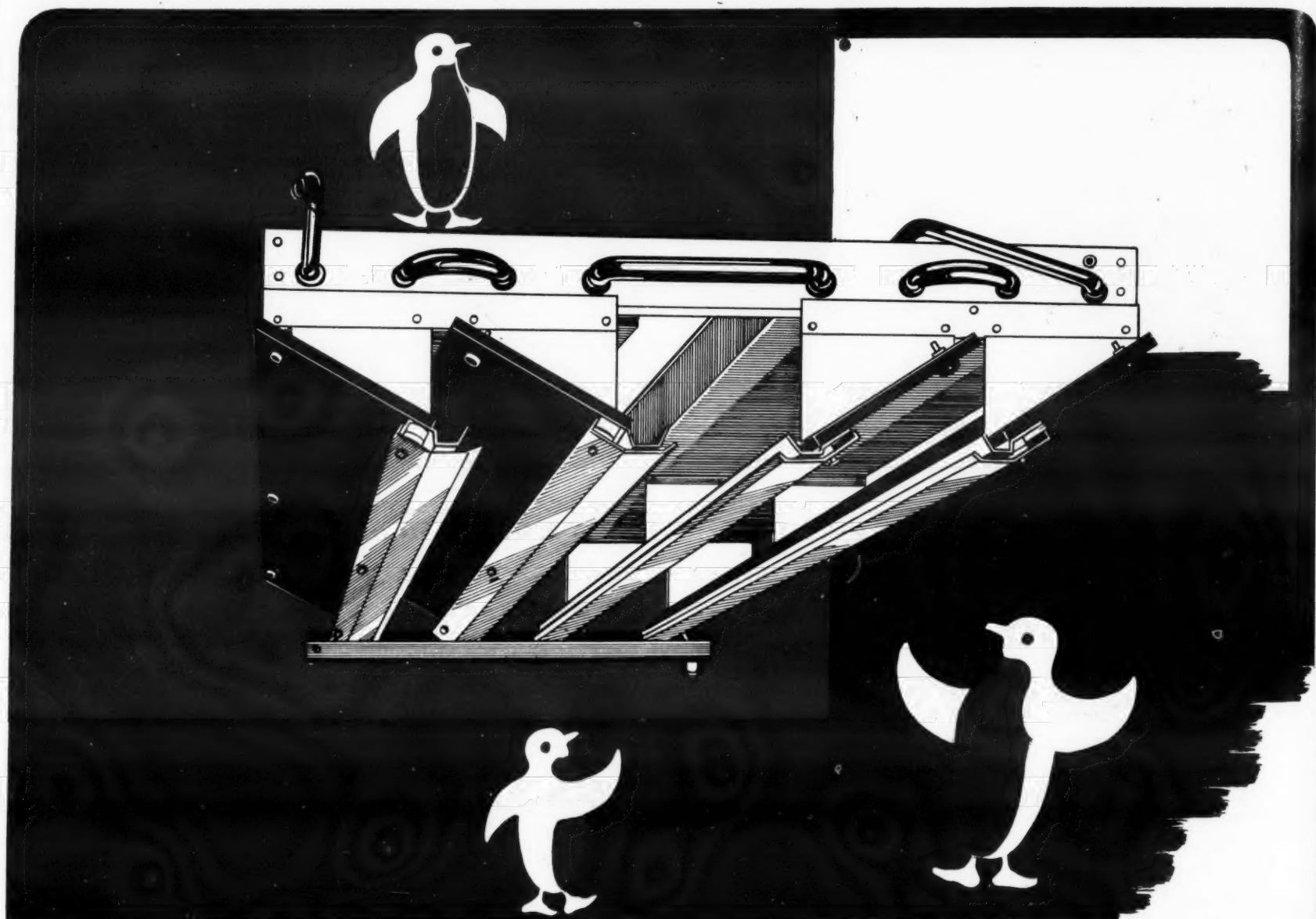
Mr. Hastings has been with the company's sales force since 1934.

Mr. Wagner comes to American Central from the General Electric Co., Bridgeport, Conn., with which he has been associated for 13 years. A member of GE's sales department for the past 10 years, Mr. Wagner was connected with the merchandising of dishwashers and cabinets.

New Attendance Record Set at Annual Party



Herman Goldberg (at the microphone), Chicago manufacturers' representative, is surrounded by the star variety show acts that entertained at his annual Christmas party, which set an attendance record with more than 1,200 members of the refrigeration industry in attendance to see the show, dance, win some of the gifts offered, and meet old friends.



Bush Plasti-Cooler

Now Available — Faster Deliveries

A noteworthy contribution by BUSH to the refrigeration industry, the BUSH PLASTI-COOLER combines the efficiency of the famed Bush Finned Coil with the proved advantages of sturdy plastics . . . the original application of plastics to the low side field. Coil features aluminum fins spaced 1/3" — 1/2" — 3/4" and copper tubing (5/8" to 100 lin. feet — 3/4" over

100 lin. feet). Baffles of gleaming, jet-black plastics eliminate all sweating . . . enhance appearance. Scientifically calculated pitching insures maximum cold air discharge. A choice of widths is available for different box sizes. The BUSH PLASTI-COOLER is the most modern evaporator at any price. For advanced engineering . . . BUY BUSH.



HARTFORD, CONNECTICUT

415 LEXINGTON AVENUE, NEW YORK * 549 W. WASHINGTON BOULEVARD, CHICAGO
EXPORT ADDRESS: 13 EAST 40TH STREET, NEW YORK * CABLE "ARLAB"